Supreme Court, U.S.
FILED

09-425 OCT 5 - 2009

OFFICE OF THE CLERK
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No. _____

In The

Supreme Court of the United States

EVERY PENNY COUNTS, INC.,

Petitioner,

v.

AMERICAN EXPRESS COMPANY, et al.,

Respondents.

On Petition For Writ Of Certiorari
To The United States Court Of Appeals,
Federal Circuit

APPENDIX VOLUME II TO PETITION FOR WRIT OF CERTIORARI

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Patent US 7,171,370 dated January 30, 2007 ..... App. II 1-App. II 42

US007171370B2

(12) **United States Patent**
Burke

(10) **Patent No.: US 7,171,370 B2**
(45) **Date of Patent: *Jan. 30, 2007**

(54) **FUNDS DISTRIBUTION SYSTEM CONNECTED WITH POINT OF SALE TRANSACTIONS**

(76) Inventor: **Bertram V. Burke**, 1526 Ocean Ave., Sea Bright, NJ (US) 07760

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **11/098,651**

(22) Filed: **Apr. 1, 2005**

(65) **Prior Publication Data**

US 2005/0167483 A1 Aug. 4, 2005

Related U.S. Application Data

(63) Continuation of application No. 09/609,777, filed on Jul. 5, 2000, now Pat. No. 6,876,971, which is a continuation of application No. 08/843,424, filed on Apr. 15, 1997, now Pat. No. 6,088,582, which is a continuation of application No. 08/349,353, filed on Dec. 5, 1994, now Pat. No. 5,621,640, which is a continuation of application No. 08/018,821, filed on Feb. 18, 1993, now abandoned, application No. 11/098,651, which is a continuation of application No. 08/429,758, filed on Apr. 27, 1995, now Pat. No. 6,112,191, and a continuation of application No. 08/493,396, filed on Jun. 22, 1995, now abandoned.

(51) **Int. Cl.**
G06Q 99/00 (2006.01)

(52) **U.S. Cl.** **705/1**; 705/16; 705/17; 705/21; 705/24; 705/30; 235/375; 235/379, 235/380

(58) **Field of Classification Search** 705/1, 705/16, 17, 21, 24, 30; 235/375, 379, 380
See application file for complete search history.

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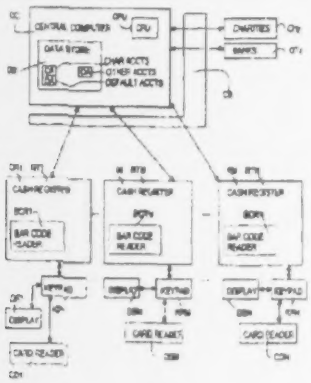
(Continued)

Primary Examiner—Jonathan Ouellette

(57) **ABSTRACT**

An automated way for sales establishments to extend point of sale (POS) cash transactions to allow consumers to save change or transfer discretionary funds into saving or donating accounts managed by a central clearinghouse. The system includes a network composed of consumer/payors with identification cards, neutral merchants who enter data and funds into remote POS terminals, central clearinghouse that offers/process accounts, and service providers for participating consumer/account holders. i.e. nonprofit giving, travel, mutual funds, savings, etc. The network provides consumers with a seamless, convenient, and painless way to save/donate every time they spend at multiple POS counter locations.

31 Claims, 30 Drawing Sheets



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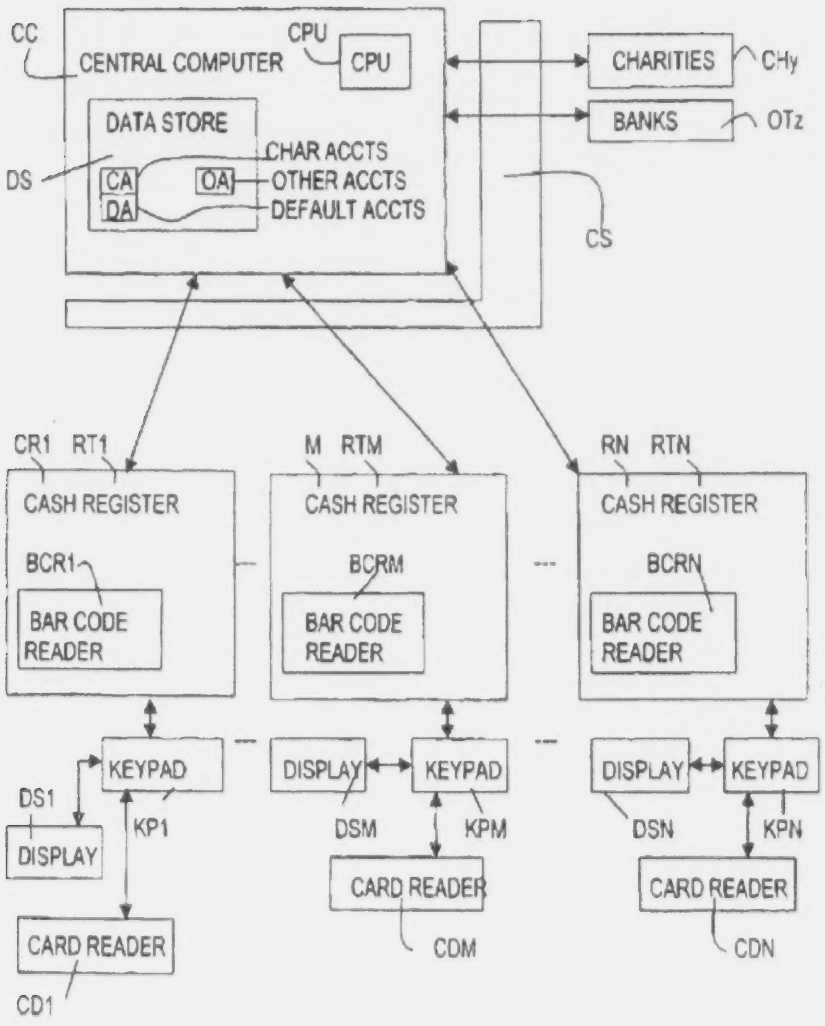
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FIG. 1


CC
CENTRAL COMPUTER
CPU
CPU
DATA STORE
DS
CA
OA
DA
CHAR ACCTS
OTHER ACCTS
DEFAULT ACCTS
CS
CHARITIES
CHy
BANKS
OTz
CR1 RT1
CASH REGISTER
BCR1
BAR CODE READER
M RTM
CASH REGISTER
BCRM
BAR CODE READER
RN RTN
CASH REGISTER
BCRN
BAR CODE READER
KEYPAD
DISPLAY
KEYPAD
DISPLAY
KEYPAD
DS1
DISPLAY
KP1
DSM
KPM
DSN
KPN
CARD READER
CARD READER
CARD READER
CDM
CDN
CD1

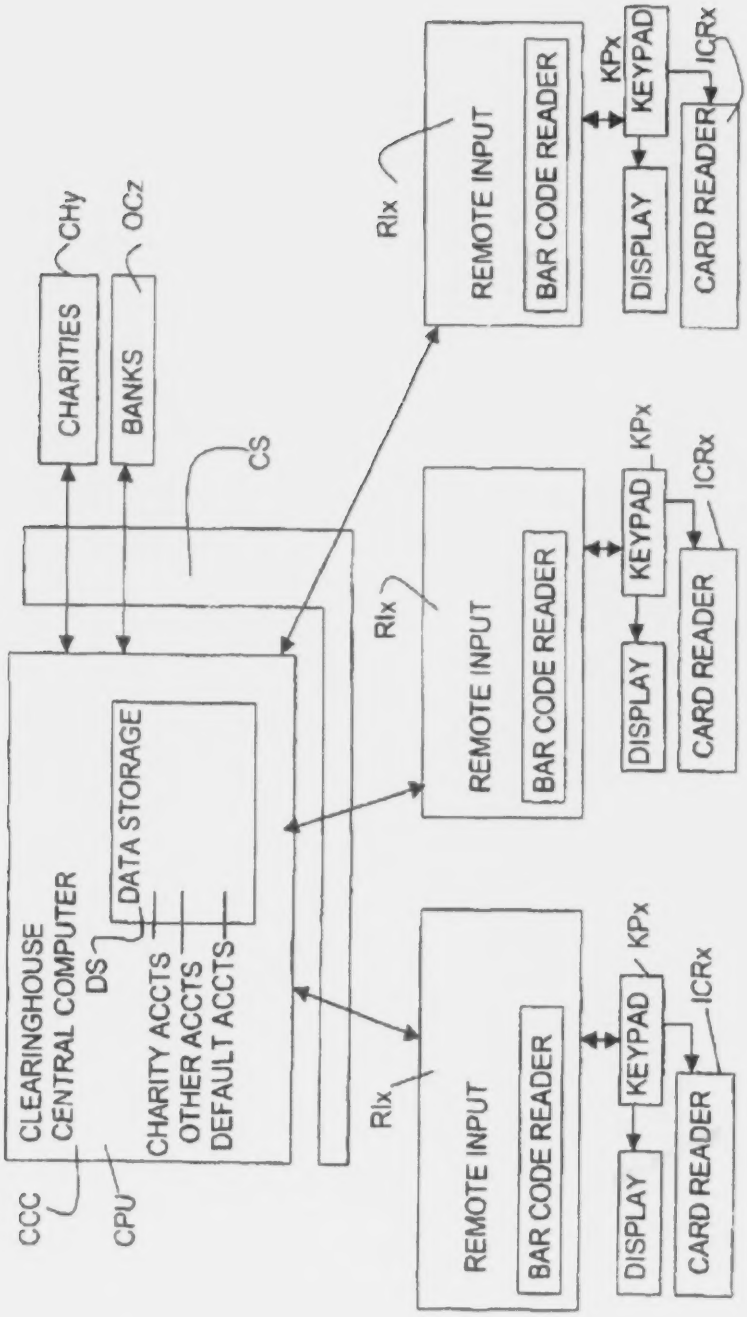

CLEARINGHOUSE
CENTRAL COMPUTER
DS
DATA STORAGE
CHARITY ACCTS
OTHER ACCTS
DEFAULT ACCTS
CCC
CPU
CHARITIES
CHy
BANKS
OCz
CS
RIx
REMOTE INPUT
BAR CODE READER
KEYPAD
KPx
DISPLAY
CARD READER
ICRx

FIG. 1A

FIG. 2

Transaction Card

DC 1

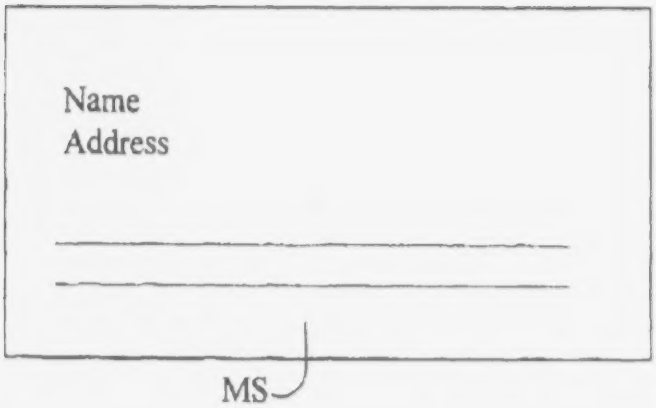


FIG. 3

DC 2

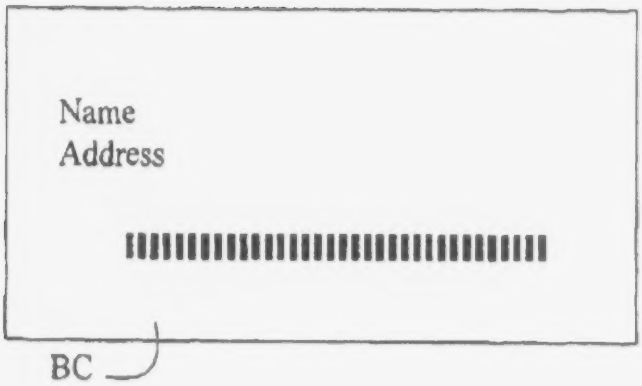


FIG. 4

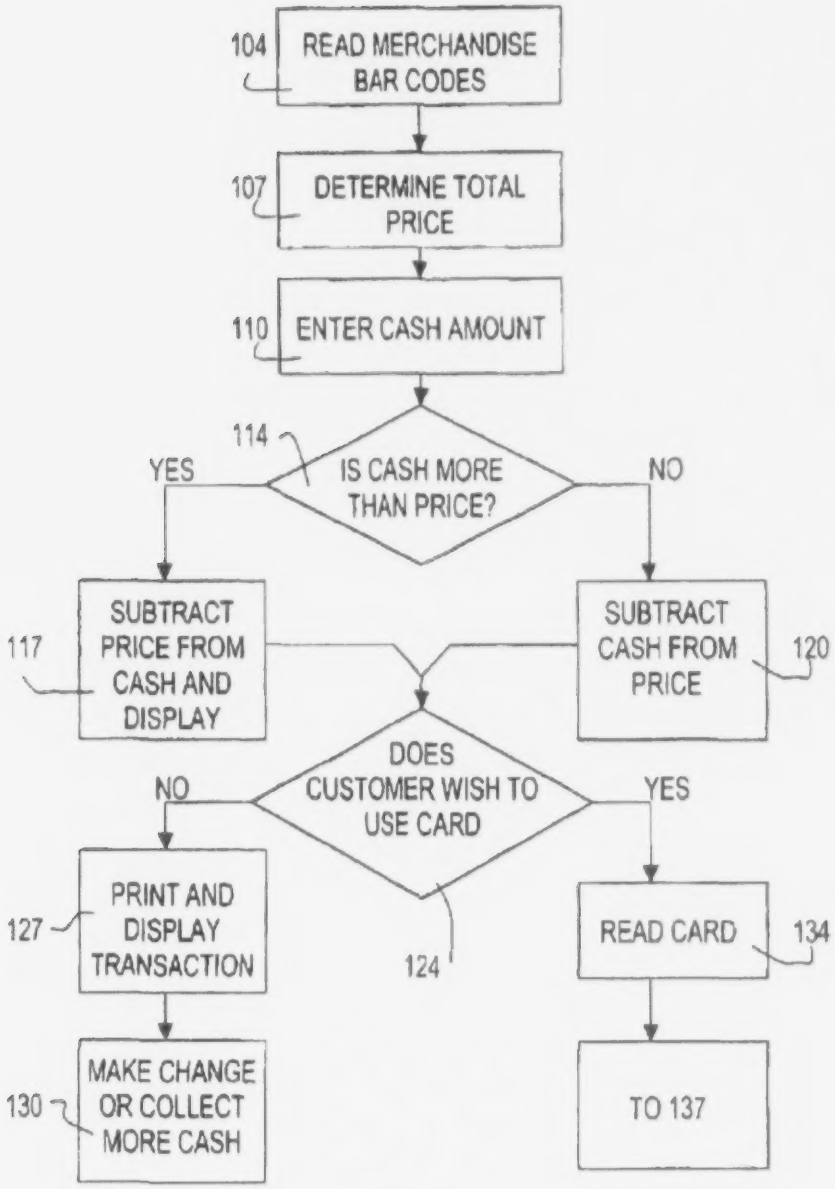

104
READ MERCHANDISE BAR CODES
107
DETERMINE TOTAL PRICE
110
ENTER CASH AMOUNT
114
IS CASH MORE THAN PRICE?
YES
NO
117
SUBTRACT PRICE FROM CASH AND DISPLAY
SUBTRACT CASH FROM PRICE
120
DOES CUSTOMER WISH TO USE CARD
NO
YES
124
127
PRINT AND DISPLAY TRANSACTION
READ CARD
134
130
MAKE CHANGE OR COLLECT MORE CASH
TO 137

FIG. 4A

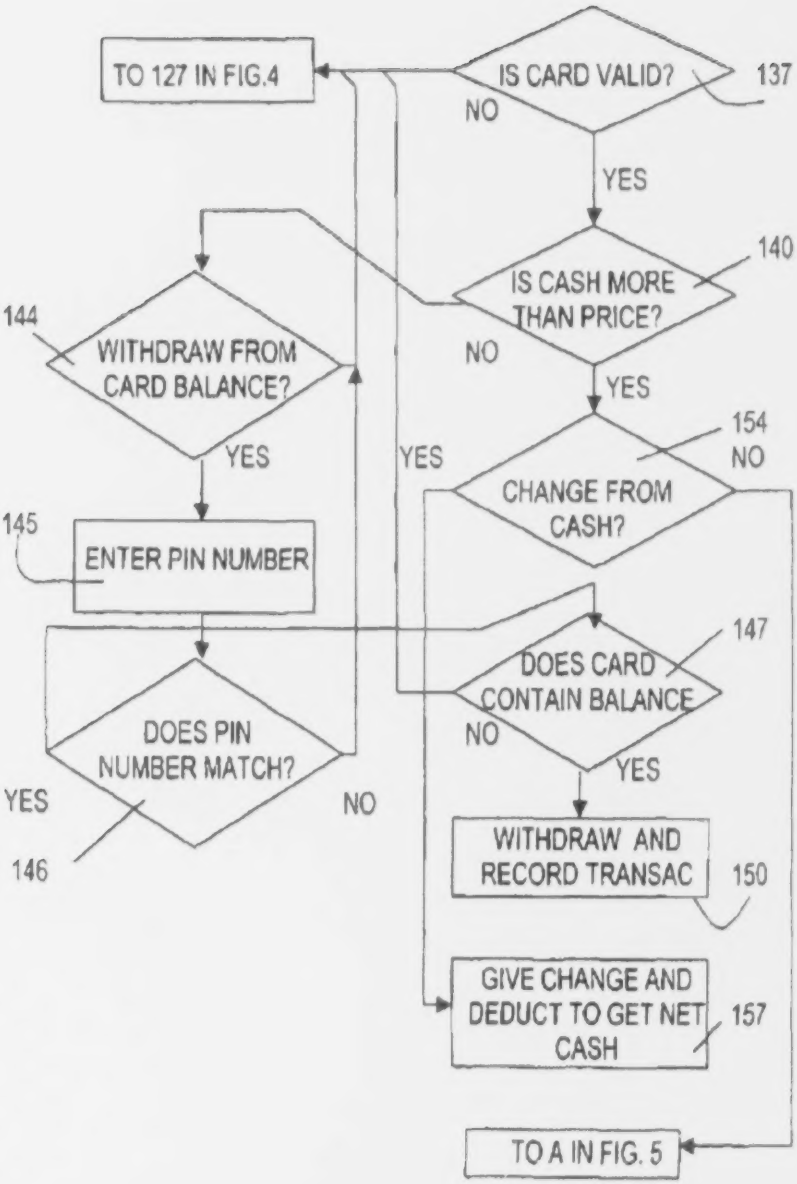

TO 127 IN FIG.4
IS CARD VALID?
137
NO
YES
140
IS CASH MORE THAN PRICE?
144
WITHDRAW FROM CARD BALANCE?
NO
YES
154
NO
YES
YES
CHANGE FROM CASH?
145
ENTER PIN NUMBER
147
DOES CARD CONTAIN BALANCE
NO
YES
DOES PIN NUMBER MATCH?
YES
NO
146
WITHDRAW AND RECORD TRANSAC
150
GIVE CHANGE AND DEDUCT TO GET NET CASH
157
TO A IN FIG. 5

FIG. 5

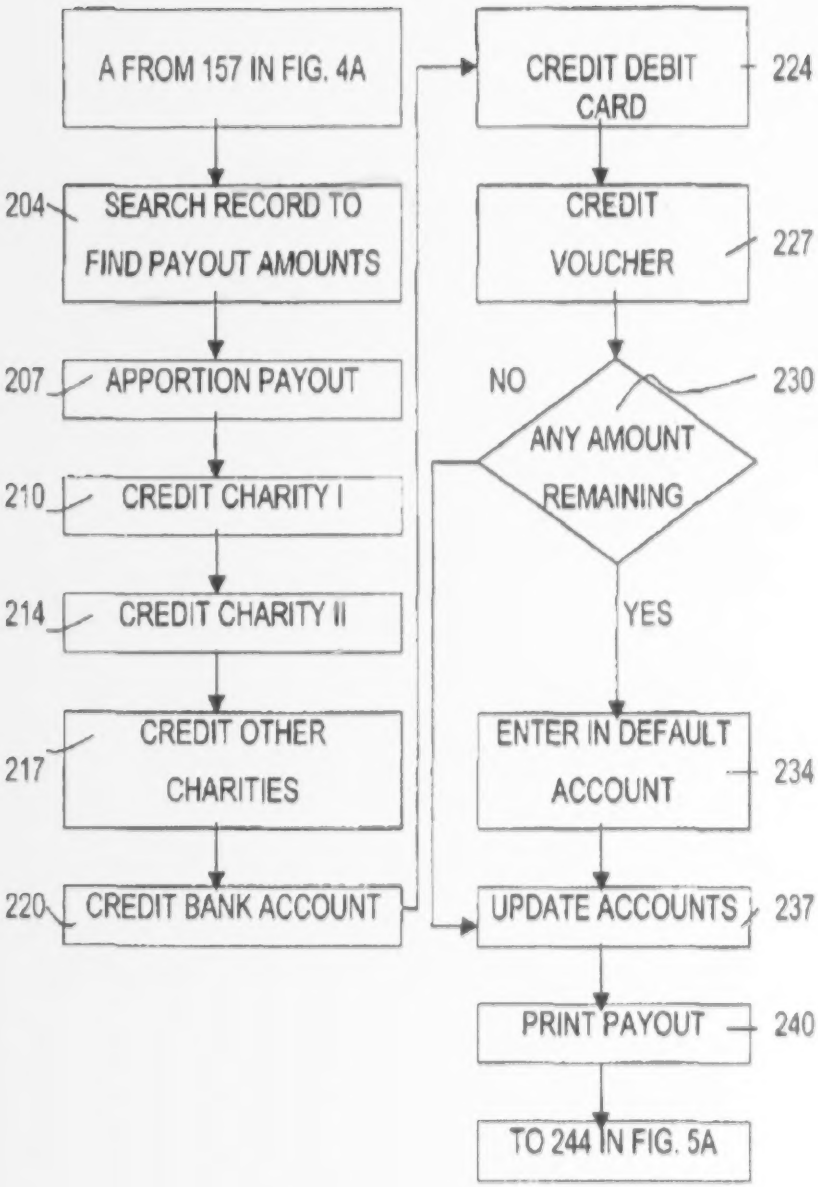

A FROM 157 IN FIG. 4A
204
SEARCH RECORD TO FIND PAYOUT AMOUNTS
207
APPORTION PAYOUT
210
CREDIT CHARITY I
214
CREDIT CHARITY II
217
CREDIT OTHER CHARITIES
220
CREDIT BANK ACCOUNT
CREDIT DEBIT CARD
224
CREDIT VOUCHER
227
NO
230
ANY AMOUNT REMAINING
YES
ENTER IN DEFAULT ACCOUNT
234
UPDATE ACCOUNTS
237
PRINT PAYOUT
240
TO 244 IN FIG. 5A

FIG. 5A

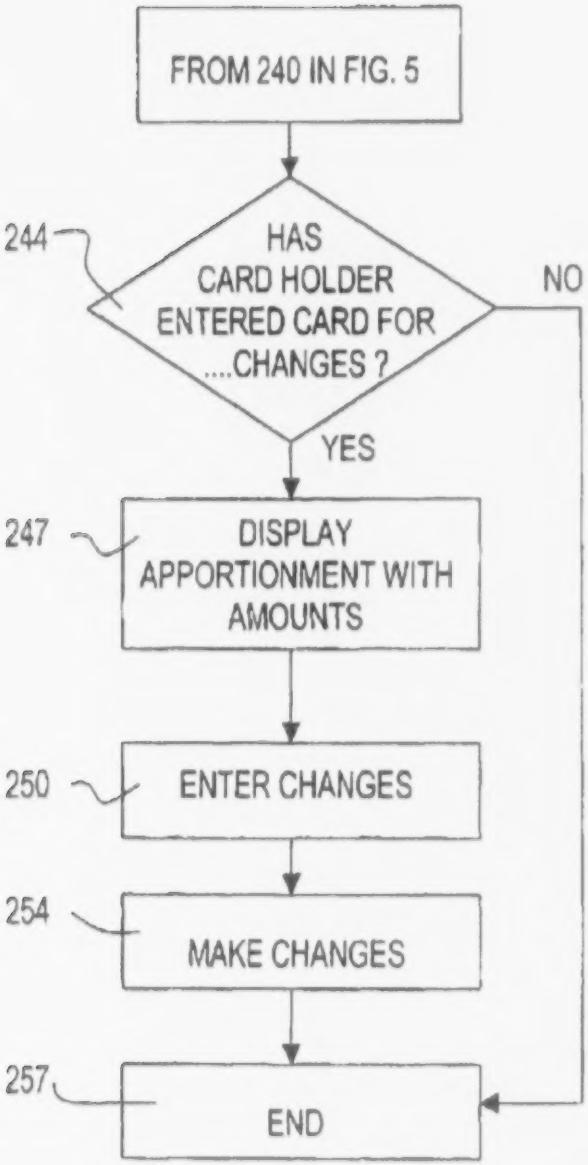

FROM 240 IN FIG. 5
244
HAS CARD HOLDER ENTERED CARD FOR ....CHANGES ?
NO
YES
247
DISPLAY APPORTIONMENT WITH AMOUNTS
250
ENTER CHANGES
254
MAKE CHANGES
257
END

FIG. 6

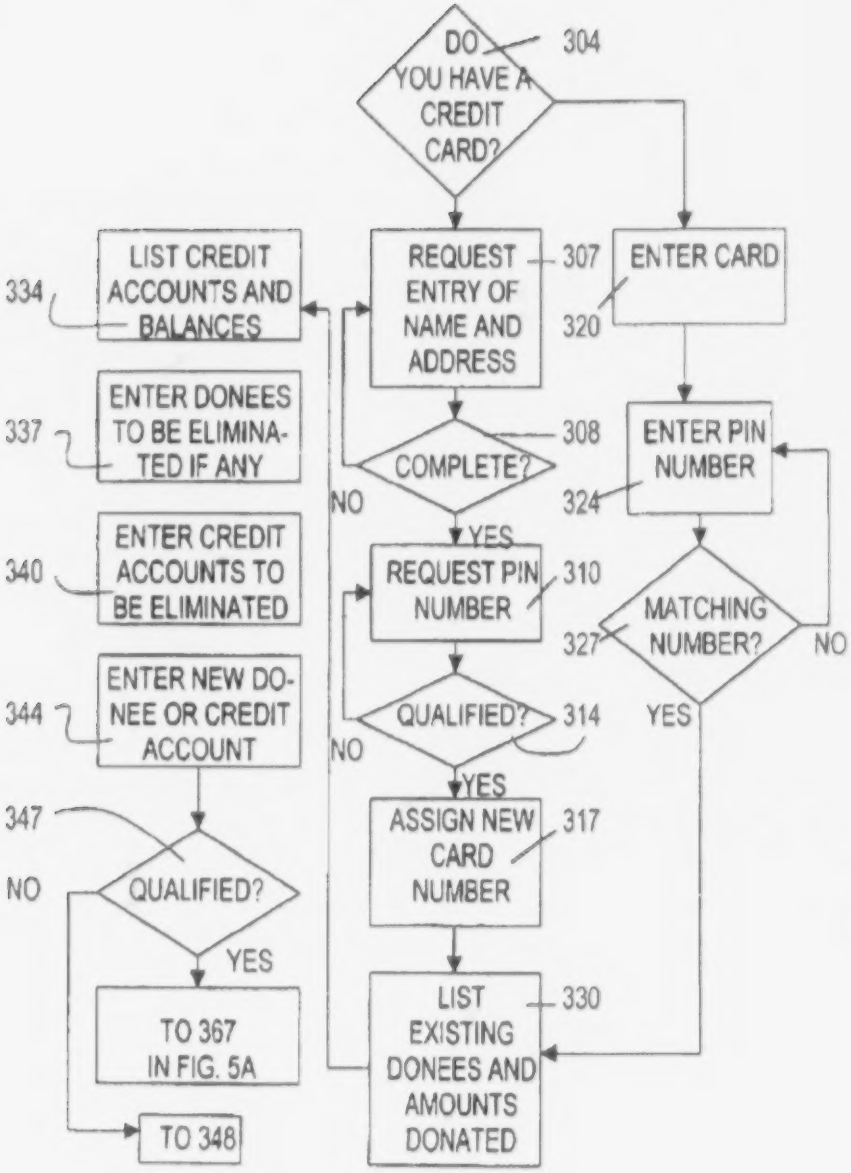

DO YOU HAVE A CREDIT CARD?
304
LIST CREDIT ACCOUNTS AND BALANCES
334
REQUEST ENTRY OF NAME AND ADDRESS
307
ENTER CARD
320
ENTER DONEES TO BE ELIMINATED IF ANY
337
COMPLETE?
308
NO
YES
ENTER PIN NUMBER
324
ENTER CREDIT ACCOUNTS TO BE ELIMINATED
340
REQUEST PIN NUMBER
310
MATCHING NUMBER?
327
NO
YES
ENTER NEW DONEE OR CREDIT ACCOUNT
344
QUALIFIED?
314
NO
YES
347
ASSIGN NEW CARD NUMBER
317
NO
QUALIFIED?
YES
TO 367 IN FIG. 5A
LIST EXISTING DONEES AND AMOUNTS DONATED
330
TO 348

FIG. 6A

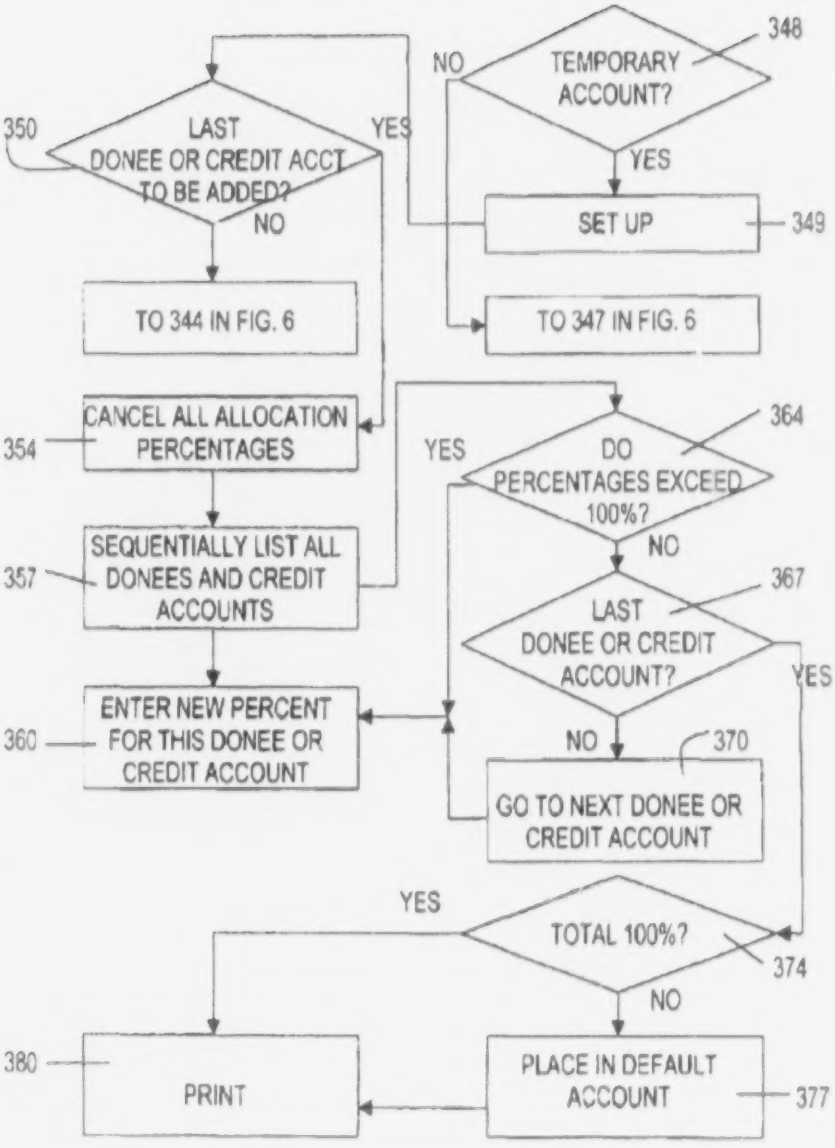

348
NO
TEMPORARY ACCOUNT?
YES
SET UP
349
350
LAST DONEE OR CREDIT ACCT TO BE ADDED?
YES
NO
TO 344 IN FIG. 6
TO 347 IN FIG. 6
CANCEL ALL ALLOCATION PERCENTAGES
354
364
YES
DO PERCENTAGES EXCEED 100%?
NO
SEQUENTIALLY LIST ALL DONEES AND CREDIT ACCOUNTS
357
367
LAST DONEE OR CREDIT ACCOUNT?
YES
ENTER NEW PERCENT FOR THIS DONEE OR CREDIT ACCOUNT
360
NO
370
GO TO NEXT DONEE OR CREDIT ACCOUNT
YES
TOTAL 100%?
374
NO
380
PRINT
PLACE IN DEFAULT ACCOUNT
377

FIG. 7

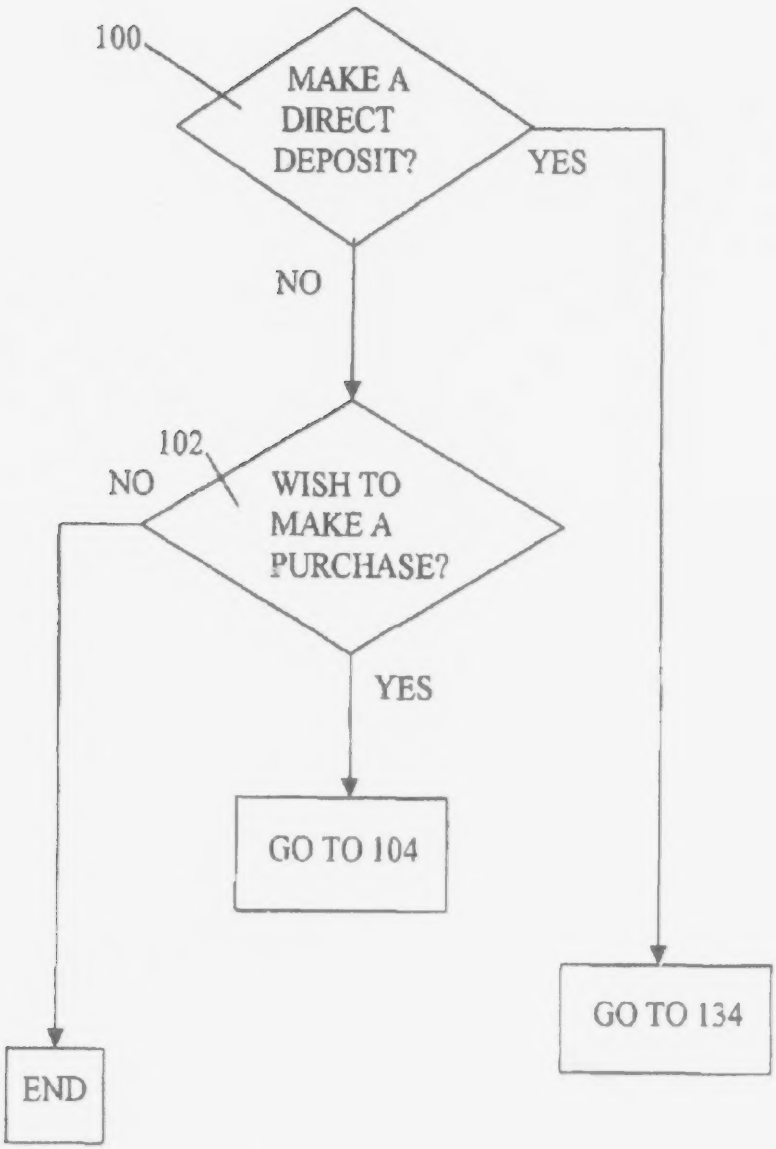

100
MAKE A DIRECT DEPOSIT?
YES
NO
102
NO
WISH TO MAKE A PURCHASE?
YES
GO TO 104
GO TO 134
END

FIG. 7A

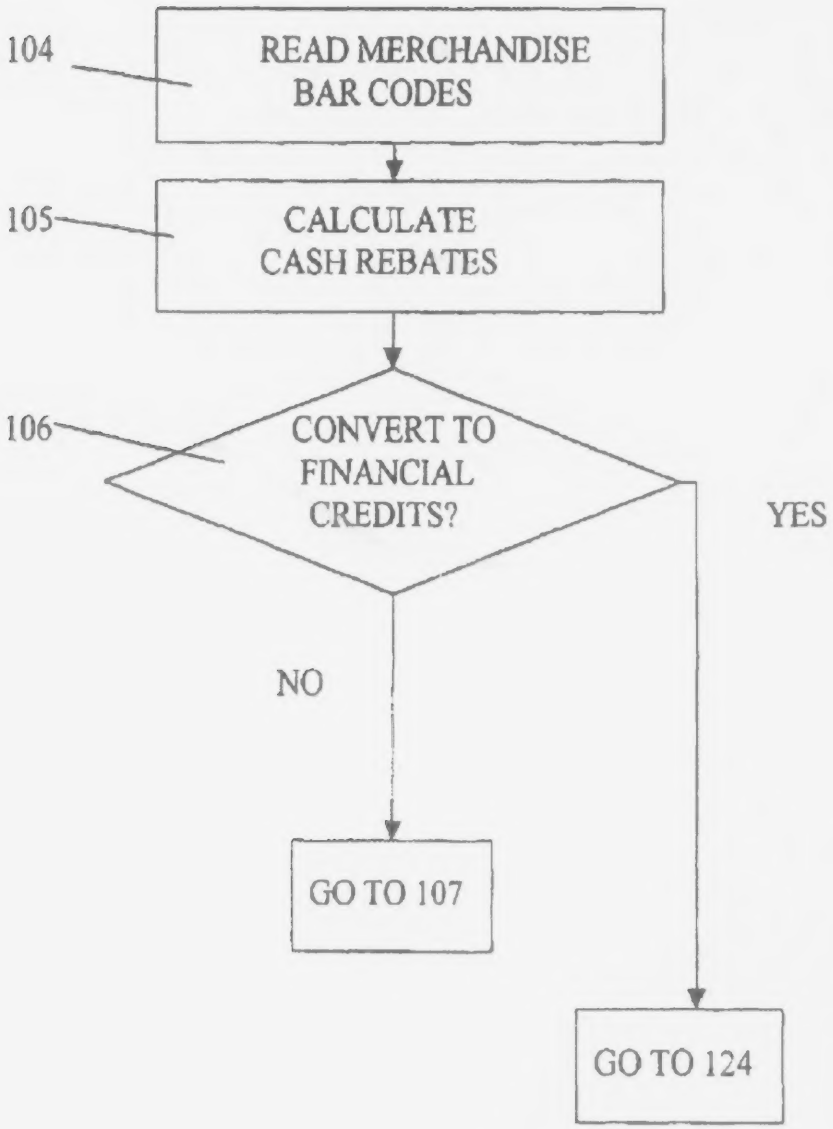

104
READ MERCHANDISE BAR CODES
105
CALCULATE CASH REBATES
106
CONVERT TO FINANCIAL CREDITS?
YES
NO
GO TO 107
GO TO 124

FIG. 8.1A

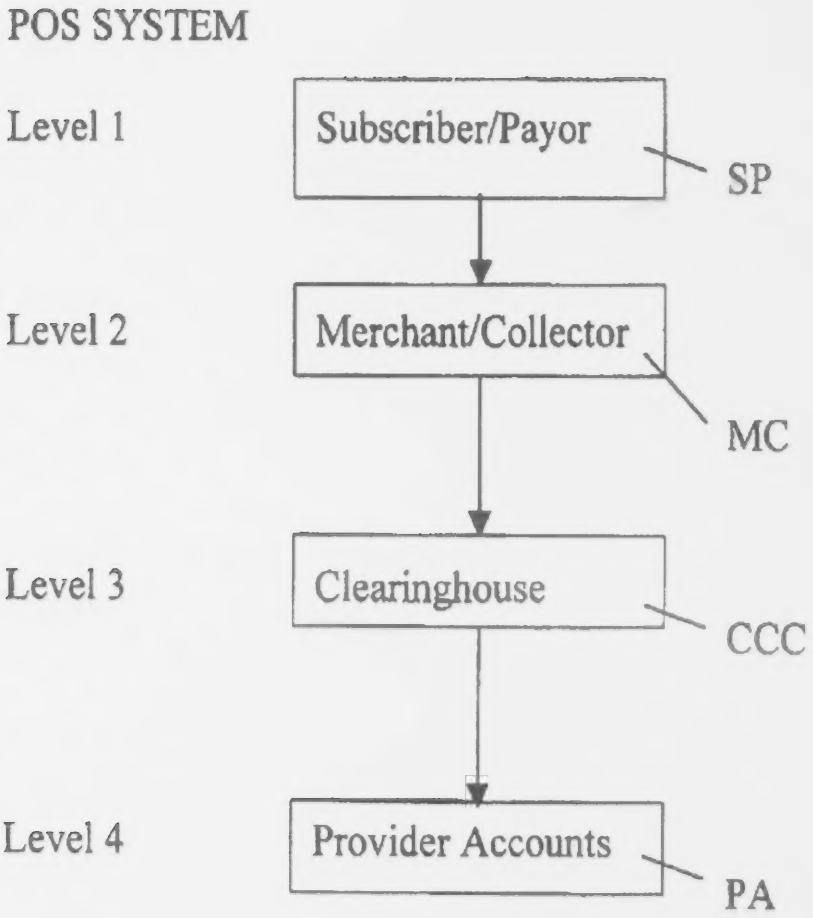

POS SYSTEM
Level 1
Subscriber/Payor
SP
Level 2
Merchant/Collector
MC
Level 3
Clearinghouse
CCC
Level 4
Provider Accounts
PA

FIG. 8.1 B

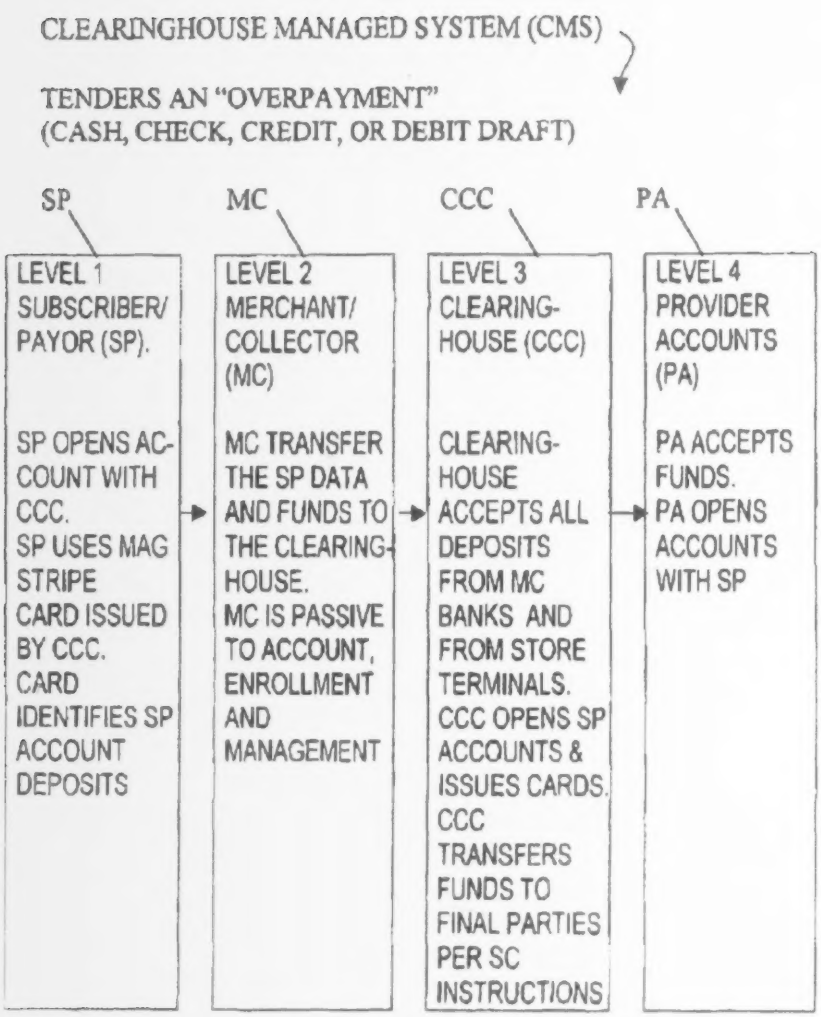

CLEARINGHOUSE MANAGED SYSTEM (CMS)
TENDERS AN "OVERPAYMENT"
(CASH, CHECK, CREDIT, OR DEBIT DRAFT)
SP
MC
CCC
PA
LEVEL 1 SUBSCRIBER/ PAYOR (SP).
SP OPENS ACCOUNT WITH CCC.
SP USES MAG STRIPE CARD ISSUED BY CCC.
CARD IDENTIFIES SP ACCOUNT DEPOSITS
LEVEL 2 MERCHANT/ COLLECTOR (MC)
MC TRANSFER THE SP DATA AND FUNDS TO THE CLEARING-HOUSE.
MC IS PASSIVE TO ACCOUNT, ENROLLMENT AND MANAGEMENT
LEVEL 3 CLEARING-HOUSE (CCC)
CLEARING-HOUSE ACCEPTS ALL DEPOSITS FROM MC BANKS AND FROM STORE TERMINALS.
CCC OPENS SP ACCOUNTS & ISSUES CARDS.
CCC TRANSFERS FUNDS TO FINAL PARTIES PER SC INSTRUCTIONS
LEVEL 4 PROVIDER ACCOUNTS (PA)
PA ACCEPTS FUNDS.
PA OPENS ACCOUNTS WITH SP

FIG. 8.1C

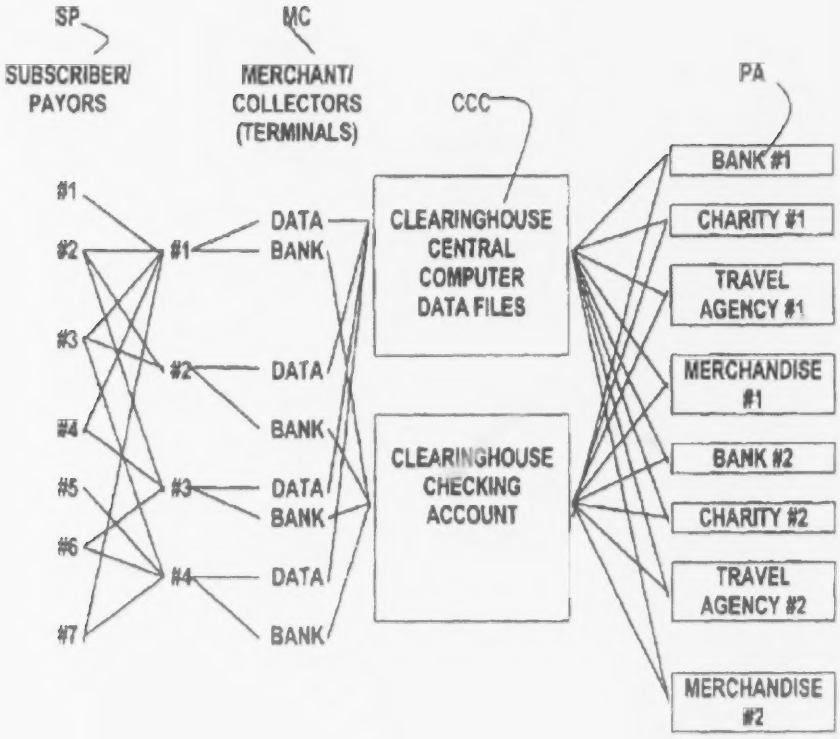

SP
SUBSCRIBER/ PAYORS
MC
MERCHANT/ COLLECTORS (TERMINALS)
CCC
PA
#1
#2
#3
#4
#5
#6
#7
#1
#2
#3
#4
DATA
BANK
DATA
BANK
DATA
BANK
DATA
BANK
CLEARINGHOUSE CENTRAL COMPUTER DATA FILES
CLEARINGHOUSE CHECKING ACCOUNT
BANK #1
CHARITY #1
TRAVEL AGENCY #1
MERCHANDISE #1
BANK #2
CHARITY #2
TRAVEL AGENCY #2
MERCHANDISE #2

FIG. 8.1D

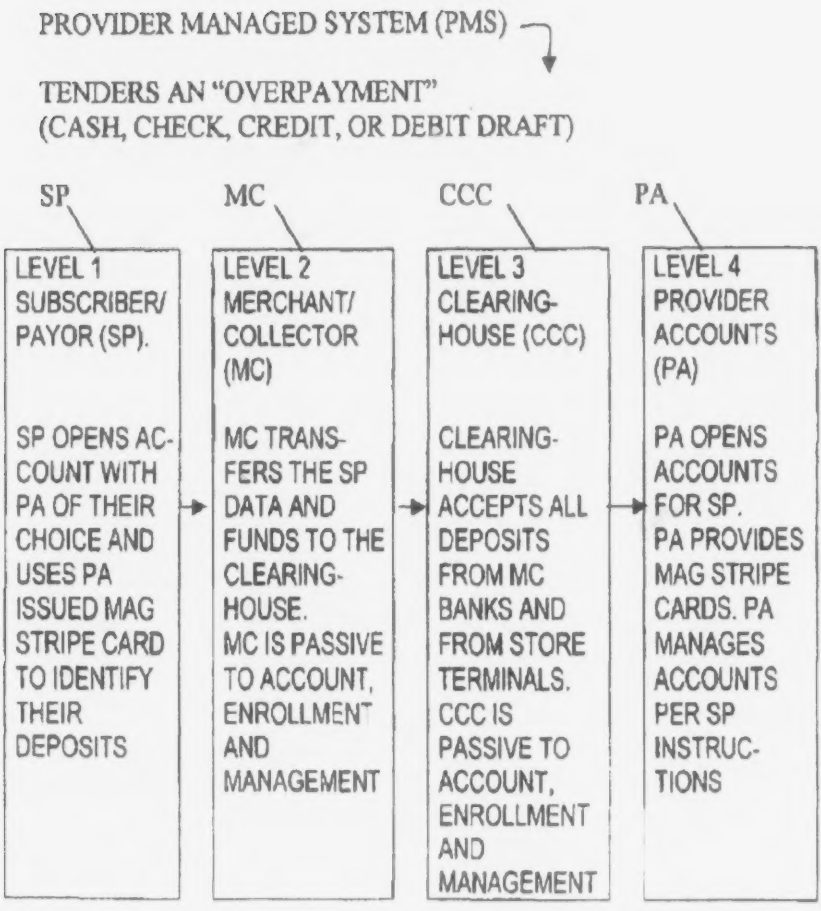

PROVIDER MANAGED SYSTEM (PMS)
TENDERS AN "OVERPAYMENT"
(CASH, CHECK, CREDIT, OR DEBIT DRAFT)
SP
MC
CCC
PA
LEVEL 1 SUBSCRIBER/ PAYOR (SP).
SP OPENS ACCOUNT WITH PA OF THEIR CHOICE AND USES PA ISSUED MAG STRIPE CARD TO IDENTIFY THEIR DEPOSITS
LEVEL 2 MERCHANT/ COLLECTOR (MC)
MC TRANSFERS THE SP DATA AND FUNDS TO THE CLEARING-HOUSE. MC IS PASSIVE TO ACCOUNT, ENROLLMENT AND MANAGEMENT
LEVEL 3 CLEARING-HOUSE (CCC)
CLEARING-HOUSE ACCEPTS ALL DEPOSITS FROM MC BANKS AND FROM STORE TERMINALS. CCC IS PASSIVE TO ACCOUNT, ENROLLMENT AND MANAGEMENT
LEVEL 4 PROVIDER ACCOUNTS (PA)
PA OPENS ACCOUNTS FOR SP. PA PROVIDES MAG STRIPE CARDS. PA MANAGES ACCOUNTS PER SP INSTRUCTIONS

FIG. 8.1E

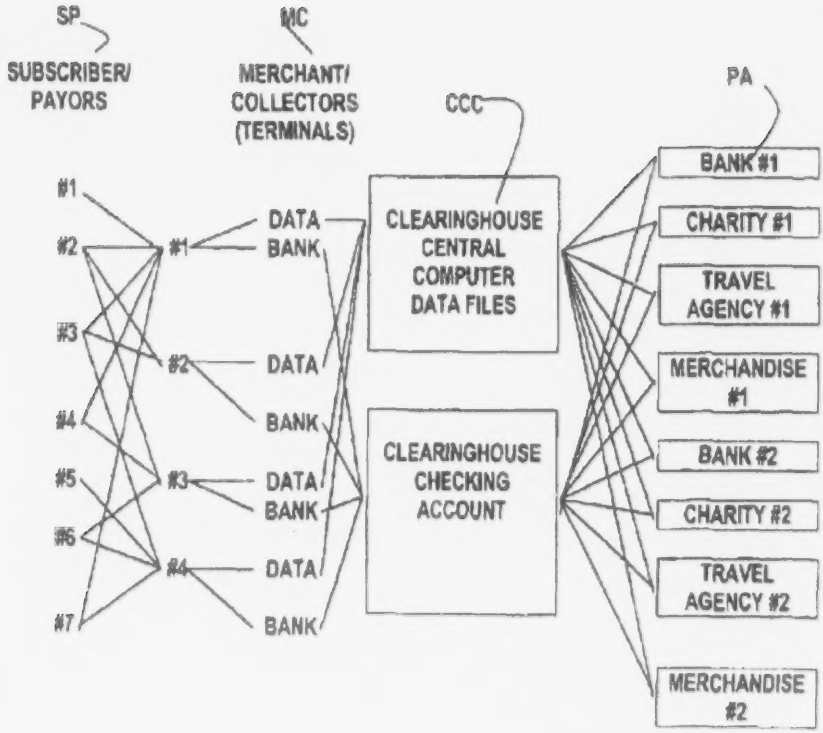
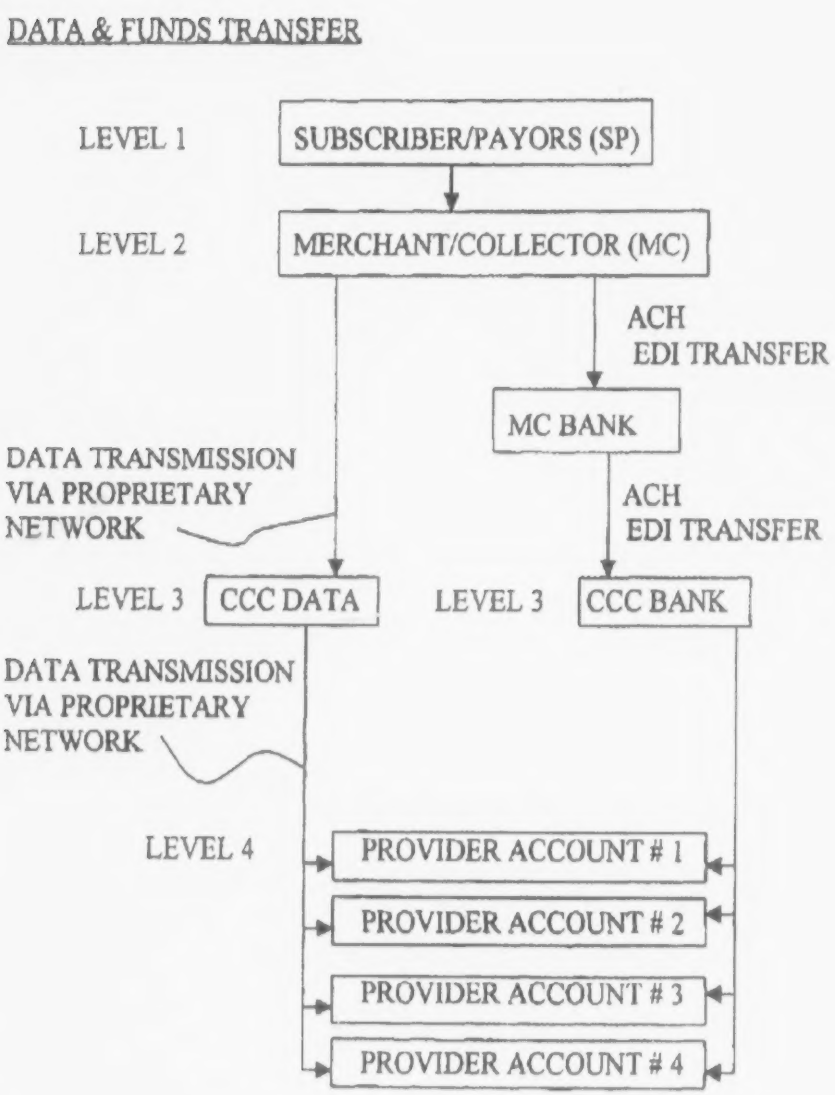

SP
SUBSCRIBER/ PAYORS
MC
MERCHANT/ COLLECTORS (TERMINALS)
CCC
PA
#1
#2
#3
#4
#5
#6
#7
#1
#2
#3
#4
DATA
BANK
DATA
BANK
DATA
BANK
DATA
BANK
CLEARINGHOUSE CENTRAL COMPUTER DATA FILES
CLEARINGHOUSE CHECKING ACCOUNT
BANK #1
CHARITY #1
TRAVEL AGENCY #1
MERCHANDISE #1
BANK #2
CHARITY #2
TRAVEL AGENCY #2
MERCHANDISE #2

FIG. 8.1 F


DATA & FUNDS TRANSFER
LEVEL 1
SUBSCRIBER/PAYORS (SP)
LEVEL 2
MERCHANT/COLLECTOR (MC)
ACH
EDI TRANSFER
MC BANK
DATA TRANSMISSION
VIA PROPRIETARY
NETWORK
ACH
EDI TRANSFER
LEVEL 3
CCC DATA
LEVEL 3
CCC BANK
DATA TRANSMISSION
VIA PROPRIETARY
NETWORK
LEVEL 4
PROVIDER ACCOUNT # 1
PROVIDER ACCOUNT # 2
PROVIDER ACCOUNT # 3
PROVIDER ACCOUNT # 4

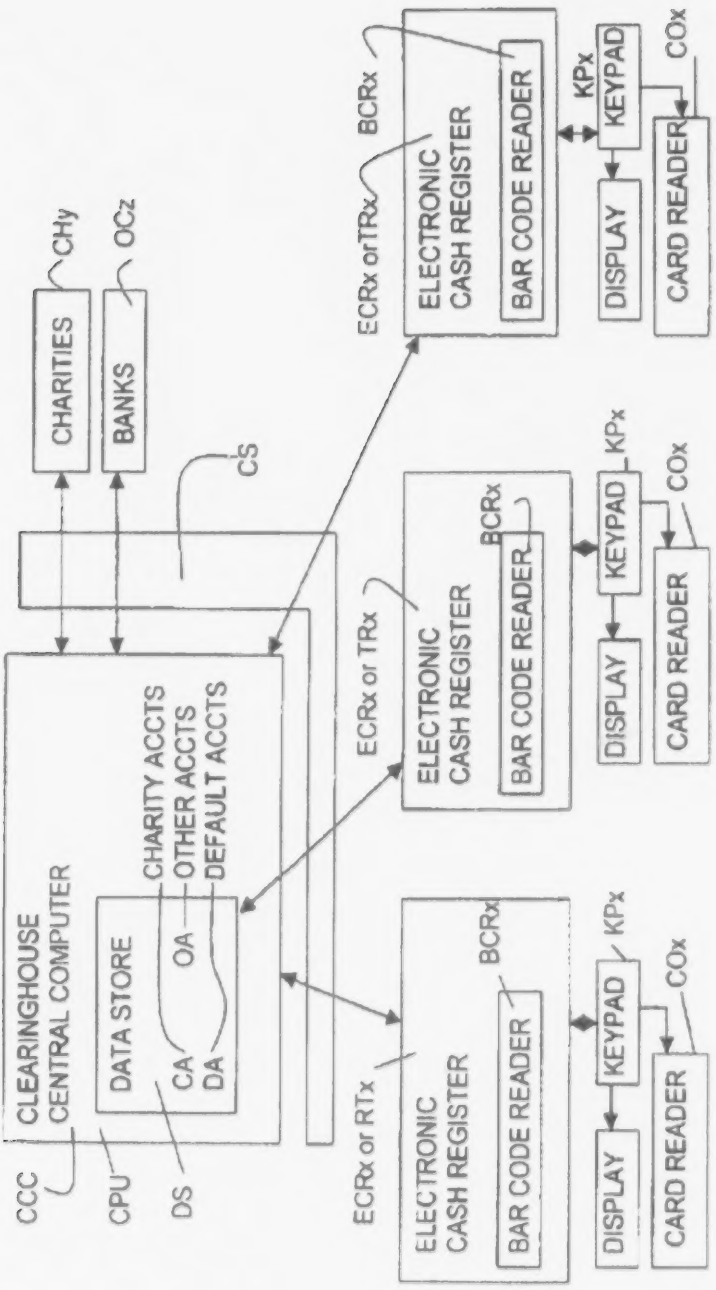

CLEARINGHOUSE
CENTRAL COMPUTER
CCC
CPU
DATA STORE
DS
CA
DA
OA
CHARITY ACCTS
OTHER ACCTS
DEFAULT ACCTS
CHARITIES
CHy
BANKS
OCz
CS
ECRx or RTx
ELECTRONIC CASH REGISTER
BAR CODE READER
BCRx
DISPLAY
KEYPAD
KPx
CARD READER
COx
ECRx or TRx
ECRx orTRx
BCRx

FIG. 8.2

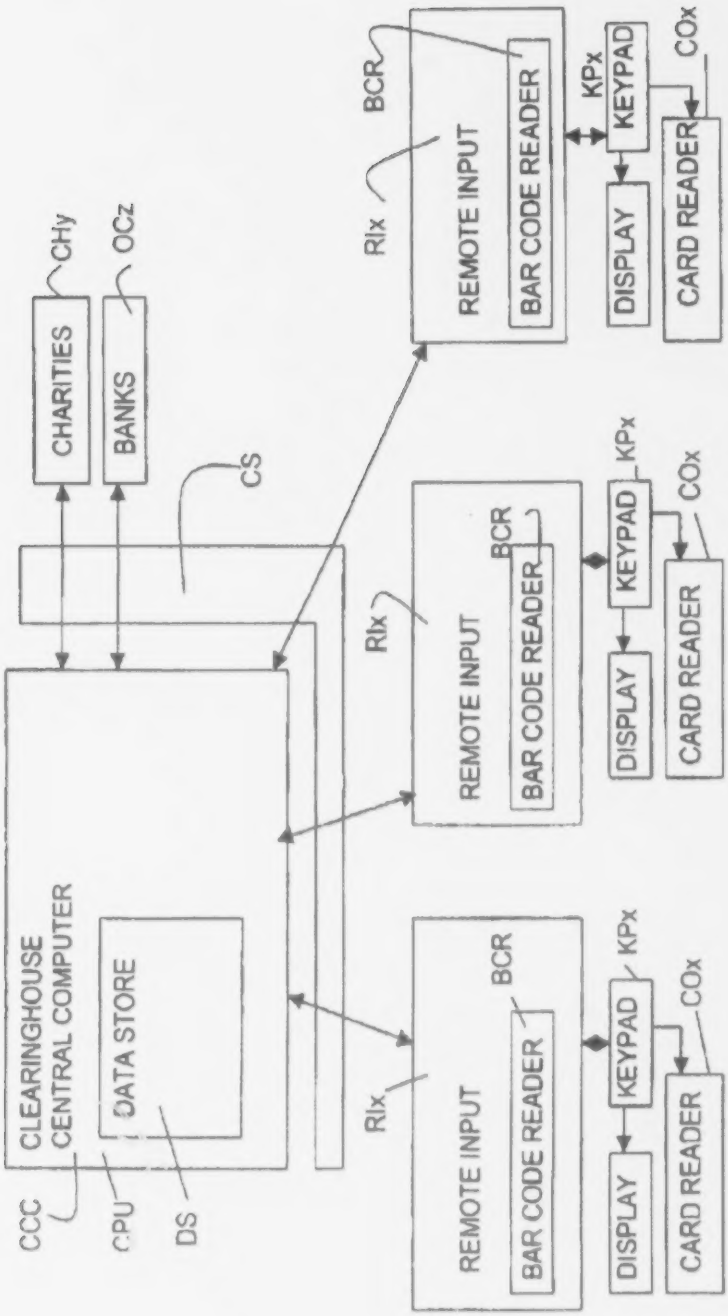

CLEARINGHOUSE CENTRAL COMPUTER
CCC
CPU
DATA STORE
DS
CHARITIES
CHy
BANKS
OCz
CS
RIx
REMOTE INPUT
BAR CODE READER
BCR
KEYPAD
KPx
DISPLAY
CARD READER
COx

FIG. 8.2A

FIG 8.3

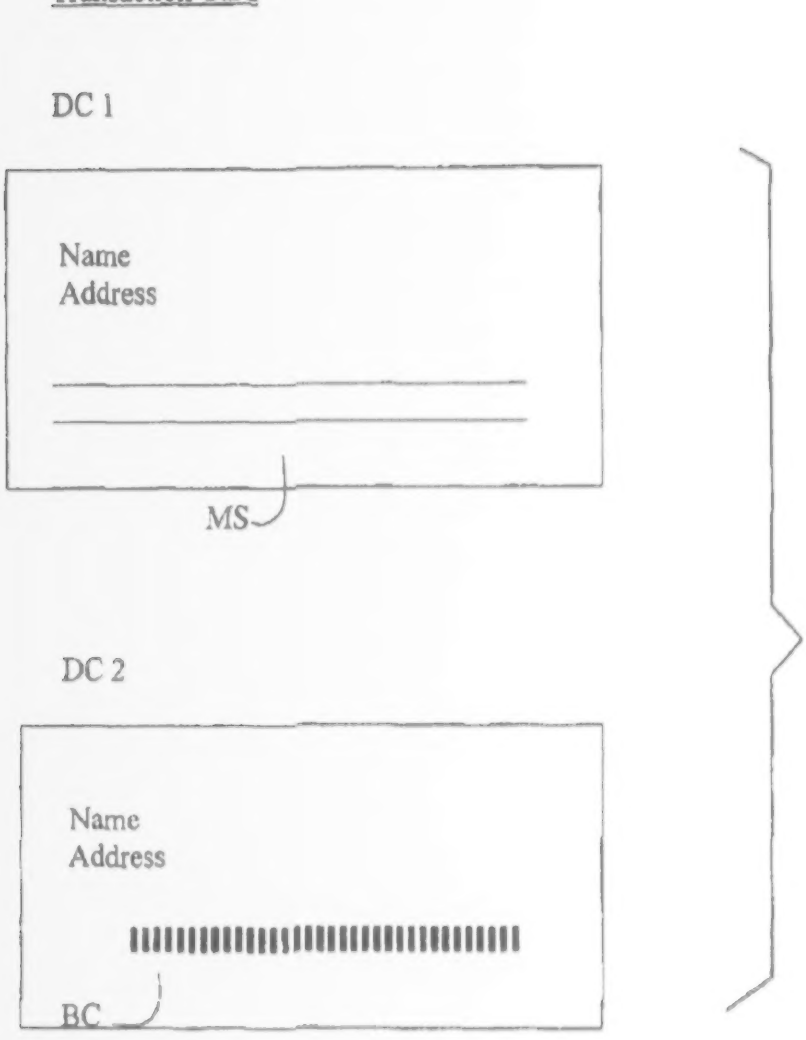


FIG 8.4

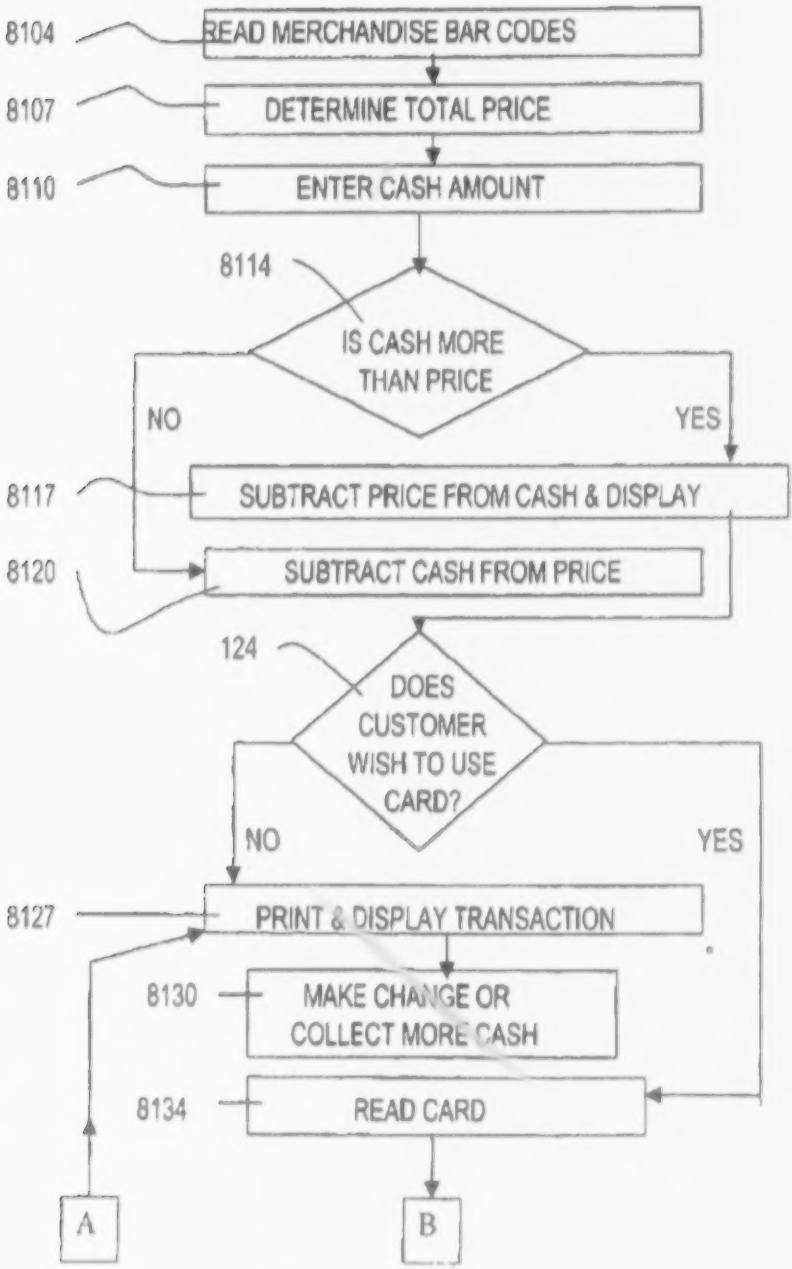

8104
READ MERCHANDISE BAR CODES
8107
DETERMINE TOTAL PRICE
8110
ENTER CASH AMOUNT
8114
IS CASH MORE THAN PRICE
NO
YES
8117
SUBTRACT PRICE FROM CASH & DISPLAY
8120
SUBTRACT CASH FROM PRICE
124
DOES CUSTOMER WISH TO USE CARD?
NO
YES
8127
PRINT & DISPLAY TRANSACTION
8130
MAKE CHANGE OR COLLECT MORE CASH
8134
READ CARD
A
B

FIG 8.4B

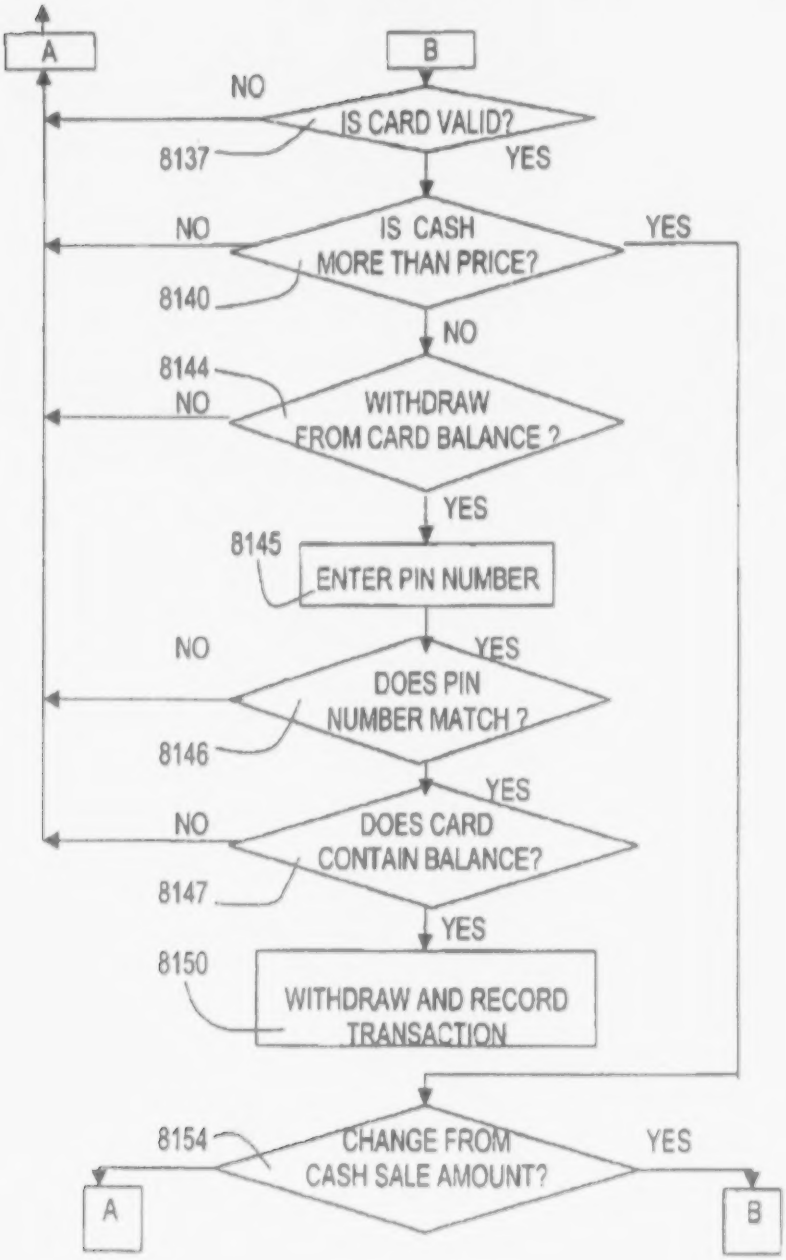
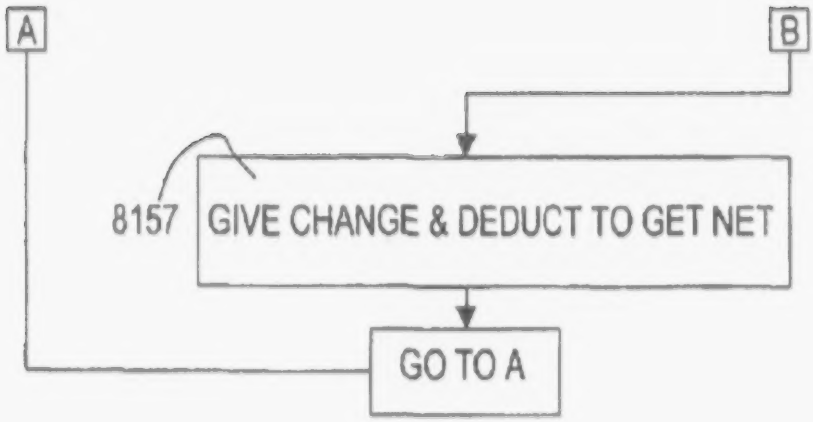

A
B
NO
IS CARD VALID?
8137
YES
NO
IS CASH MORE THAN PRICE?
YES
8140
NO
8144
NO
WITHDRAW FROM CARD BALANCE ?
YES
8145
ENTER PIN NUMBER
NO
YES
DOES PIN NUMBER MATCH ?
8146
YES
NO
DOES CARD CONTAIN BALANCE?
8147
YES
8150
WITHDRAW AND RECORD TRANSACTION
8154
CHANGE FROM CASH SALE AMOUNT?
YES
A
B

FIG. 8.4C



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FIG. 8.4D

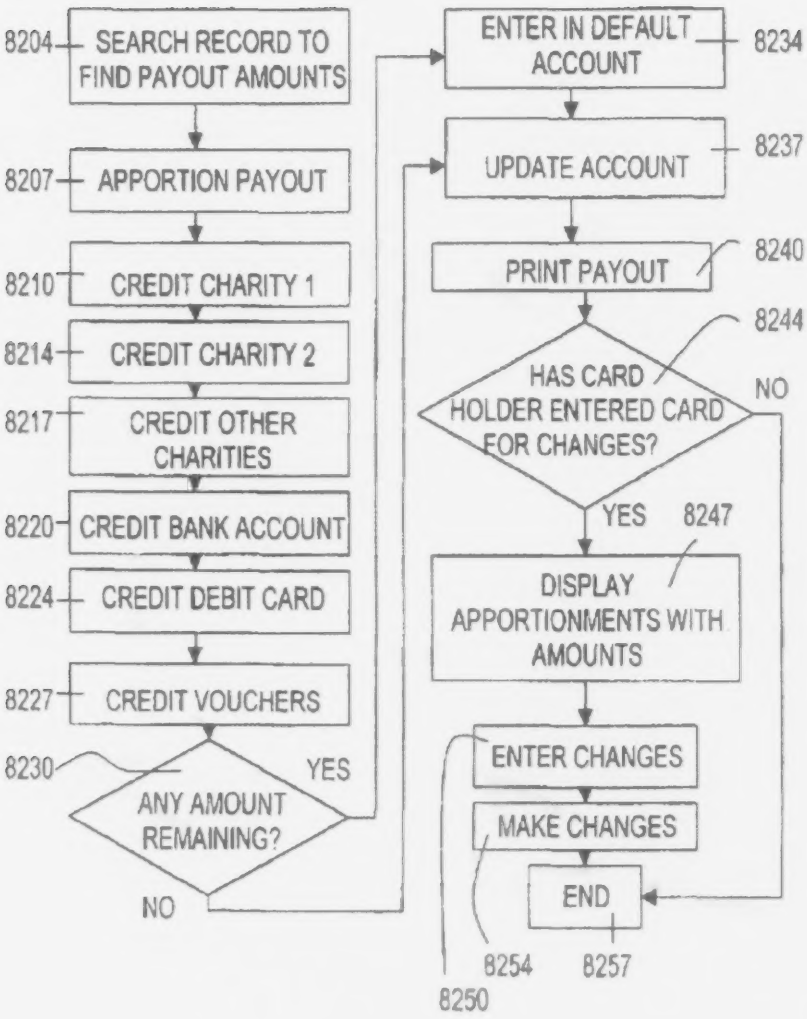


FIG. 8.5A

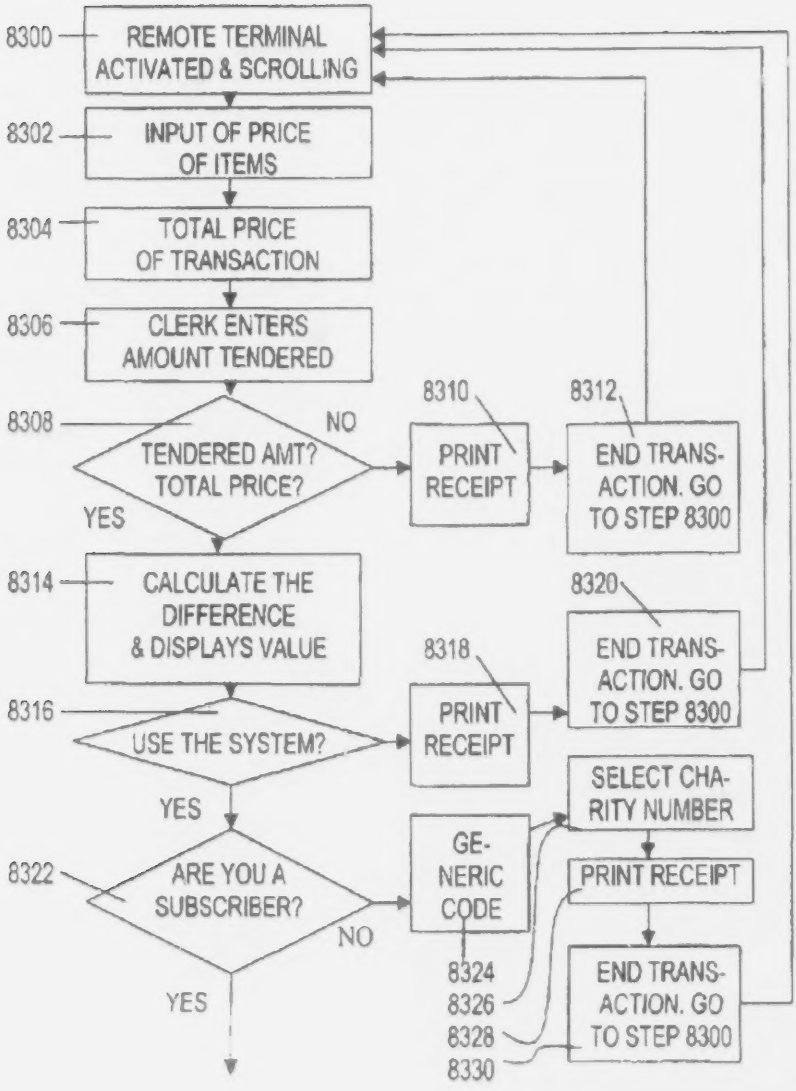

8300
REMOTE TERMINAL ACTIVATED & SCROLLING
8302
INPUT OF PRICE OF ITEMS
8304
TOTAL PRICE OF TRANSACTION
8306
CLERK ENTERS AMOUNT TENDERED
8308
TENDERED AMT? TOTAL PRICE?
NO
YES
8310
PRINT RECEIPT
8312
END TRANS-ACTION. GO TO STEP 8300
8314
CALCULATE THE DIFFERENCE & DISPLAYS VALUE
8316
USE THE SYSTEM?
8318
PRINT RECEIPT
8320
END TRANS-ACTION. GO TO STEP 8300
YES
8322
ARE YOU A SUBSCRIBER?
NO
YES
GE-NERIC CODE
SELECT CHA-RITY NUMBER
PRINT RECEIPT
END TRANS-ACTION. GO TO STEP 8300
8324
8326
8328
8330

FIG. 8.5B

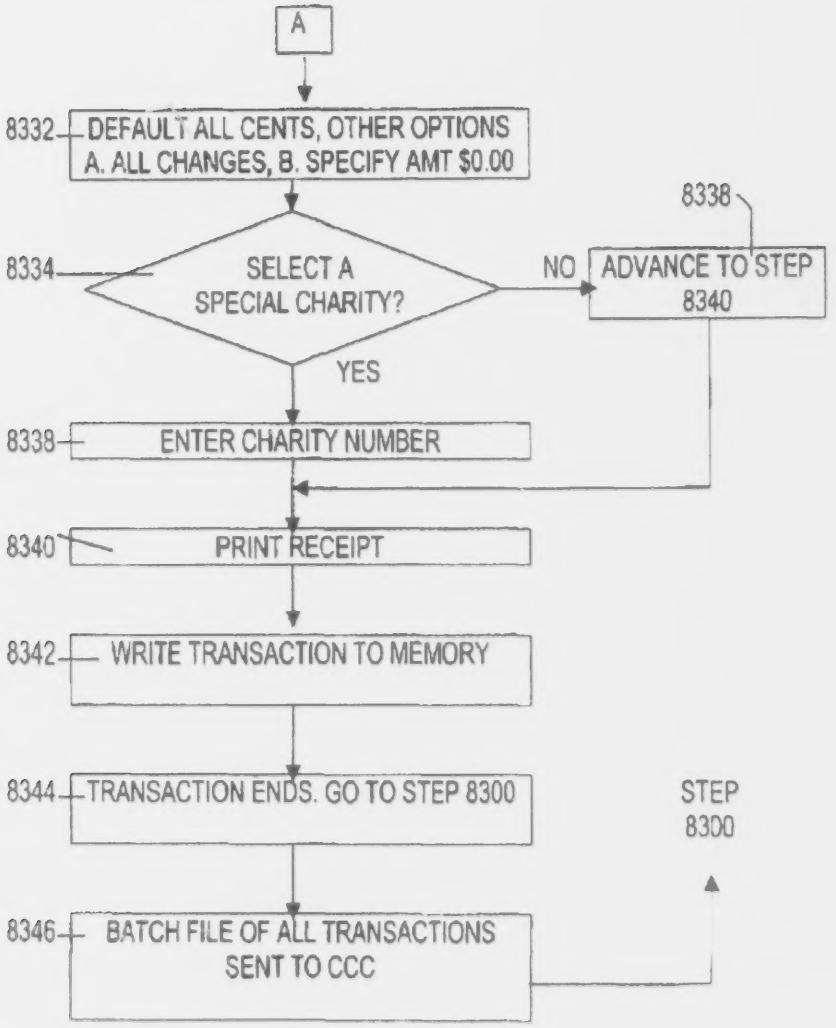

A
8332
DEFAULT ALL CENTS, OTHER OPTIONS
A. ALL CHANGES, B. SPECIFY AMT $0.00
8338
8334
SELECT A SPECIAL CHARITY?
NO
ADVANCE TO STEP 8340
YES
8338
ENTER CHARITY NUMBER
8340
PRINT RECEIPT
8342
WRITE TRANSACTION TO MEMORY
8344
TRANSACTION ENDS. GO TO STEP 8300
STEP 8300
8346
BATCH FILE OF ALL TRANSACTIONS SENT TO CCC

FIG. 8.6A

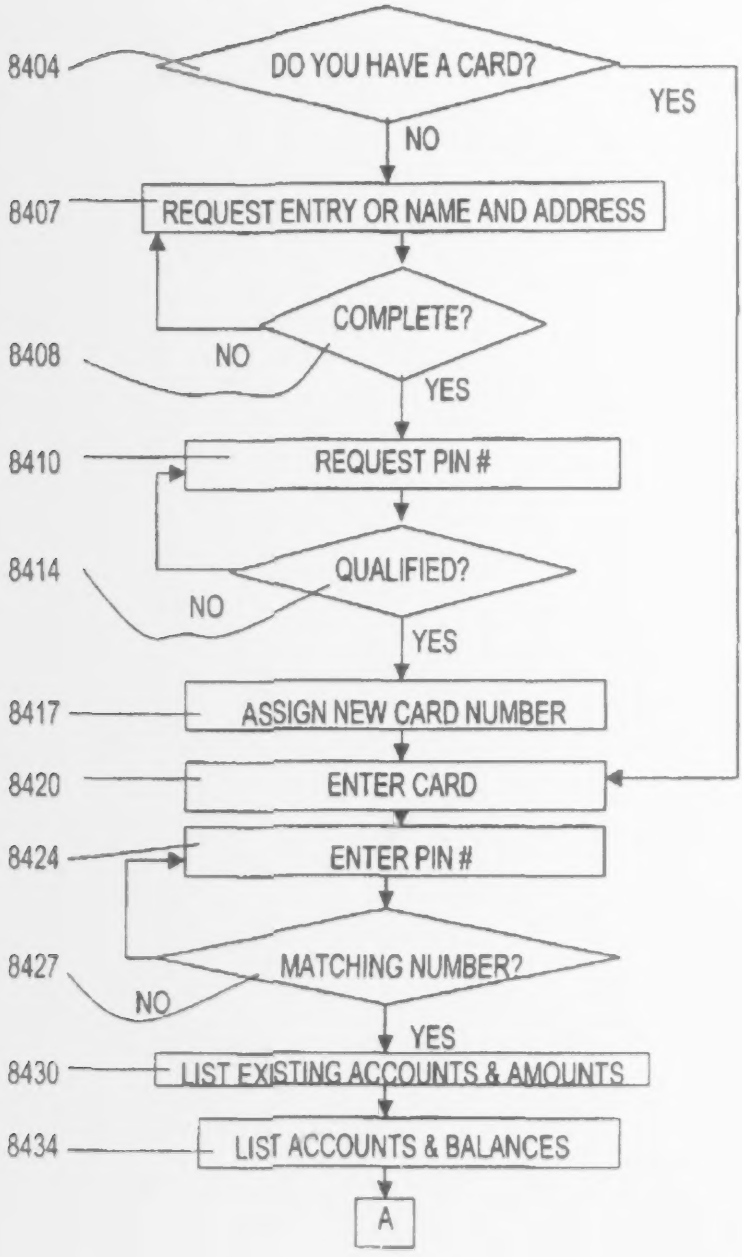

8404
DO YOU HAVE A CARD?
YES
NO
8407
REQUEST ENTRY OR NAME AND ADDRESS
COMPLETE?
8408
NO
YES
8410
REQUEST PIN #
8414
QUALIFIED?
NO
YES
8417
ASSIGN NEW CARD NUMBER
8420
ENTER CARD
8424
ENTER PIN #
8427
MATCHING NUMBER?
NO
YES
8430
LIST EXISTING ACCOUNTS & AMOUNTS
8434
LIST ACCOUNTS & BALANCES
A

FIG. 8.6B

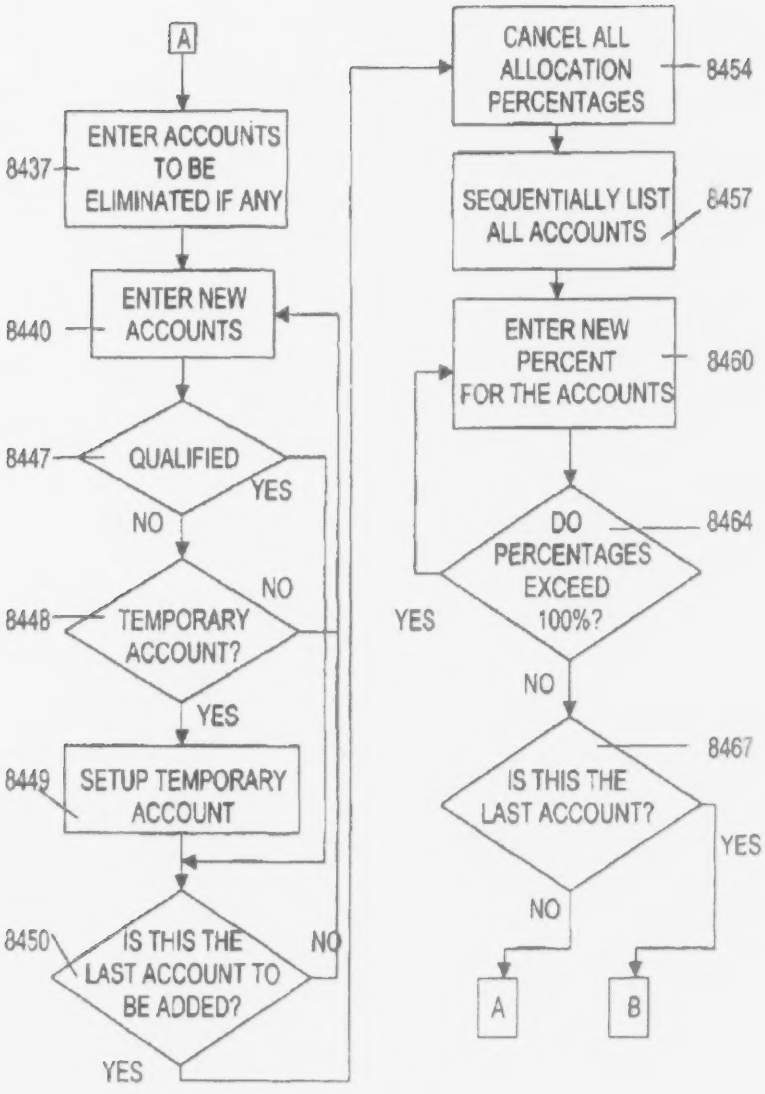

A
ENTER ACCOUNTS TO BE ELIMINATED IF ANY
8437
ENTER NEW ACCOUNTS
8440
QUALIFIED
8447
YES
NO
TEMPORARY ACCOUNT?
8448
NO
YES
SETUP TEMPORARY ACCOUNT
8449
IS THIS THE LAST ACCOUNT TO BE ADDED?
8450
NO
YES
CANCEL ALL ALLOCATION PERCENTAGES
8454
SEQUENTIALLY LIST ALL ACCOUNTS
8457
ENTER NEW PERCENT FOR THE ACCOUNTS
8460
DO PERCENTAGES EXCEED 100%?
8464
YES
NO
IS THIS THE LAST ACCOUNT?
8467
YES
NO
A
B

FIG. 8.6C

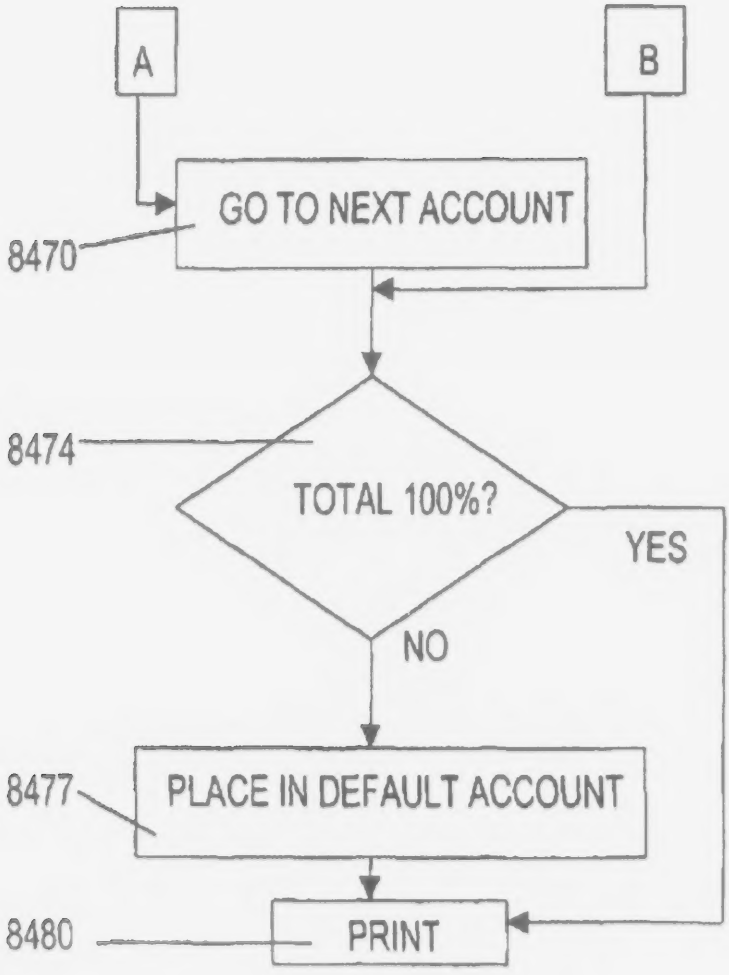

A
B
GO TO NEXT ACCOUNT
8470
8474
TOTAL 100%?
YES
NO
8477
PLACE IN DEFAULT ACCOUNT
8480
PRINT

FIG. 9


9100
MAKE A DIRECT DEPOSIT?
YES
NO
9102
WISH TO MAKE A PURCHASE?
NO
YES
GO TO 8104
END
GO TO 8134

FUNDS DISTRIBUTION SYSTEM CONNECTED WITH POINT OF SALE TRANSACTIONS

REFERENCE TO CO-PENDING APPLICATIONS

This is a Continuation of application Ser. No. 09/609,777 Filed Jul. 5, 2000 now U.S. Pat. No. 6,876,971; which is a continuation of Ser. No. 08/843,424 Filed Apr. 15, 1997 now U.S. Pat. No. 6,088,682, which is a Continuation In Part of my applications Ser. No. 08/349,353 filed Dec. 5, 1994, now U.S. Pat. No. 5,621,640, which is a continuation of Ser. No. 08/018,821 filed on Feb. 18, 1993, now abandoned; Ser. No. 08/429,758 filed Apr. 27, 1995 now U.S. Pat. No. 6,112,191; and Ser. No. 08/493,396 filed Jun. 22, 1995, now abandoned

FIELD OF THE INVENTION

This invention relates generally to improved methods and systems to extend the scope and impact of consumer Point of Sale (POS) transactions

BACKGROUND OF THE INVENTION

In current shopping situations a consumer makes a cash transaction and all activity ceases. In most occurrences the transaction produces excess change that is often a nuisance to the consumer. The fact that consumers often receive troublesome and often unwanted coins or bills provides a unique opportunity for consumers to save or charitably give at point of sale counters. In addition, at point of sale counters consumers often have funds over and above the amount they will dedicate to their spending transactions. Providing consumers with a way to set aside such discretionary funds would also provide consumers with a painless and convenient way to save or give.

SUMMARY OF THE INVENTION

An embodiment of the invention involves opening, maintaining, and accumulating credits in a payor's account that results from instructing merchants to forward data and funds to a clearinghouse for apportionment and distribution for services or goods

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a block diagram of the POS system embodiments

FIG. 1A is a block diagram of the POS system embodiments

FIGS. 2 and 3 are views of identifier cards forming part of the embodiment in FIGS. 1 and 1A

FIGS. 4, 4A, 5, and 5A are flow diagrams of the steps that take place in FIGS. 1 and 1A

FIGS. 6 & 6A are flow diagrams of steps that take place in a computer in FIGS. 1 and 1A

FIG. 7 is another flow diagram of the steps that take place in a computer in FIGS. 1 & 1A

FIG. 7A is yet another flow diagram of the steps that take place in a computer in FIGS. 1 & 1A

FIG. 8.1A is a block diagram of the POS system and features of the embodiments

FIGS. 8.1B & 8.1C are block diagrams of the Clearinghouse Managed System and features of the embodiments

FIGS. 8.1D & 8.1E are block diagrams of the Provider Managed System and features of the embodiments

FIG. 8.1F is a block diagram of the Data and Funds Transfer used in both POS systems and features of the embodiments.

FIG. 8.2 is a block diagram of POS system hardware involving FIGS. 8.1A to 8.1F.

FIG. 8.2A is a block diagram of POS system hardware involving FIGS. 8.1A to 8.1F.

FIG. 8.3 is a view of transaction cards forming part of the embodiment in FIGS. 8.2 & 8.2A

FIGS. 8.4A to 8.4D are flow diagrams of the steps that take place in FIGS. 8.2 & 8.2A.

FIGS. 8.5A & 8.5B are flow diagrams of steps that take place in a computer in FIGS. 8.1B, 8.1C, 8.2, & 8.2A.

FIGS. 8.6A to 8.6C are flow diagrams of enrollment steps that take place in a computer in FIGS. 8.1B, 8.1C, 8.2, & 8.2A.

FIG. 9 is a flow diagram of the steps that take place in a computer in FIGS. 8.1B, 8.1C, 8.2, & 8.2A.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

In FIG. 1, an embodiment of the system includes a central computer CC containing a central processor CPU and a large data storage DS. A communications system CS that may include telephone lines, satellites, or cables connects the central computer CC to a number of cash registers CRx (where x=1, . . . M, . . . N) in retail outlets, such as shops, supermarkets, gasoline stations, department stores, etc. at locations remote from the central computer. Throughout this specification, the term x, when appended to the end of a reference character, is equal to 1, . . . M, . . . N

The cash registers CRx connect to respective keypads KPx and card readers CDx. Each cash register CRx, keypad KPx, and card reader CDx connected to each other represents a remote terminal RTx. Each cash register CRx is connected to the central computer CC. Money is collected at the cash registers CRx for crediting to the consumers' ledgers in the accounts of various charities and other institutions such as banks, debit card issuers, credit card issuers, etc. The data storage DS contains individual storages for charity accounts CA and other accounts OA, such as for banks etc., all with ledgers for individual consumers.

The communications system CS also connects the central computer CC to charity computers CHy and other computer OCz, where y=1 . . . k, and z=1 . . . j such as bank computers BKx and various charities such as debit account holders, credit card issuers, etc. These charities and other institutions are the ultimate receivers of the donations and the money transfers collected at the cash registers CRx. The computer CC also includes a default account DA with consumer ledgers to hold moneys not otherwise allocated

The cash register CRx includes a change display for exhibiting cash transactions, credit cards, or check purchases. The display automatically operates to show numbers in question. A card reader CDx with a keypad KPx allows the donor or clerk to enter the donation directly. The keypad KPx permits the donor to change the allocation for this transaction alone or permanently. The keypad KPx also allows the donor to reduce the amount donated so that he can receive cash change. The terminal RTx reports the donation directly to the central computer CC via the communication system CS. The central computer CC prints out periodic reports for interested parties on a need-to-know basis

FIG. 1A is identical to FIG. 1 except that the cash registers CRx are replaced generally by remote inputs RII RIM . . . RIN (RIx collectively). Examples of such inputs

include cash registers, point of sale terminals, and draft capture machines. In the description below, reference to cash registers CRx also generally includes the remote inputs RIx.

According to an embodiment, a consumer in a shop, supermarket, gasoline station, department store, etc. selects the desired merchandise and brings them to a clerk. The clerk inputs the price of all items in a cash register CRx by way of a register keyboard or a bar code reader and the register totals the price. The consumer then offers the clerk either the exact amount of cash or a sum exceeding the price, and the clerk enters that cash and the amount into the cash register. The cash register CRx then subtracts the price from the cash.

If the consumer gives the clerk the exact price nothing more need happen. However, if the money offered the clerk exceeds the price, the consumer may, if he or she wishes, choose to receive the change or to donate or save all or a portion of the change. To do the latter, he or she enters a donor card number into the keypad KPx or enters the donor card itself into the card reader CDx. The latter reads the number from a bar code or magnetic stripe on the card. The consumer can also enter into the keypad how much of the total change he or she is to receive should be credited to various predetermined accounts in the central computer CC. The register CRx reads the numbers entered into the keyboard or the number entered by way of the card reader CDx.

A donor card DC1 according to an embodiment appears in FIG. **2** with a magnetic stripe MS carrying the donor's number. A card DC2 in FIG. **3** includes the number in the form of a bar code BA.

After receiving the data, the register CRx accesses the central computer CC. The latter allocates the change, or portion of the change selected by the consumer, among various charity accounts CA and other accounts OA in the computer CC according to the preprogrammed commands which the consumer has previously entered into the central computer. The consumer receives a printout of all donor transactions as well as the just-completed commercial transaction.

If desired, the consumer can choose to donate only a fraction of the difference between the cash presented and the price. The consumer then enters the amount to be donated and receives the appropriate cash change.

According to another embodiment, with every transaction, the computer CC electronically transfers all amounts allocated to each charity CHy, immediately or as soon as the computer can access the charity computer. In this way the donor is always assured that the contribution takes effect immediately. Transfers in the other accounts OA may be sent immediately or held until a sufficient amount is accumulated to be acceptable by the other institutions.

An example of the operation of a cash register CRx, keypad KPx, and card reader CDx appears in the flow chart of FIGS. **4** and **5**. Here, it is assumed that the customer is purchasing merchandise that may carry bar codes. However, the system is also applicable for purchase of services, rentals, or other valuables.

In step **104** of FIG. **4**, the clerk enters the prices of the various pieces of merchandise, either by way of a keyboard (not shown) or a bar code reader BCRx, into the cash register CRx. In step **107**, the cash register determines the total price. The customer then gives the clerk the cash to cover or exceed the total price. While this example refers to cash, the system is also applicable to payment by credit card. That is, the customer may wish to have an amount charged to the credit card in excess of the price in order to make donations or distributions according to an embodiment. For purposes of this description the word cash is used also to embrace credit card payments.

In step **110**, the clerk then enters the amount of the cash payment into the cash register. Under normal circumstances, the cash payment will equal or exceed the total price. However, the system allows the donor to withdraw moneys from a credit balance in one of the accounts recorded in the central computer CC. While unlikely, this may also occur with a credit card sale. Thus, in some situations, the amount of cash may fall short of the total price. In step **114** the cash register determines in the amount of cash exceeds the total price.

If the answer is yes, the cash exceeds the sale price, the register CRx determines the amount of change by subtracting the price from the cash in step **117**. If the answer is no, the cash does not exceed the sale price the register determines the amount due in step **120**. In step **124**, the cash register CRx asks whether the customer has and wishes to use a donor card. The clerk or customer may respond by keyboard, or directly by entering the donor card into the card reader CDx.

If the customer does not have or does not wish to use a donor card in response to step **124**, the cash register CRx prints the transaction in step **127** and in step **130**, prompts the clerk to make change or collect more cash. If the customer does not offer any needed cash the clerk must abort or otherwise correct the transaction.

If the customer wishes to use a donor card, the clerk may enters this information into the register's keyboard, or the customer may enter the card into the card reader CDx. In step **134**, the register communicates with the central computer, and the two read the donor card. In step **137**, the computer CC determines whether the card is valid. If not, the register CRx returns to step **127**.

If the card is valid, the cash register CRx again asks if the cash offered exceeds the total price in step **140**. If not, in step **144**, the computer CC and the cash register CRx prompts the cash register CRx display DI to ask if the cash register should debit the deficient amount from one of the cardholder's accounts. If not, the process returns to step **127**.

If the answer to step **144** is yes, the computer CC, in step **145**, asks the customer to enter his or her personal identification (PIN) number. In step **146**, the computer CC determines if the PIN number matches the card number. If not the computer returns to step **127**. If yes, it determines if the card contains a sufficient balance to cover the amount due. If not, the process again returns to step **127**. If yes, in step **150**, the computer withdraws the money from the consumer's account and credits it to the merchant's account. In step **150**, the cash register CRx also prints out the transaction.

If the answer to step **140**, namely to the question whether there is more cash than the price, is yes, step **154** causes the cash register CRx to display a message asking whether the customer wishes to retain some of the change due. If yes, the cash register CRx and the computer CC prompt the customer to enter in the keypad KPx how much he or she wish to retain or donate. In step **157**, the cash register CRx indicates to the clerk to give the appropriate net change and shows the net donor amount.

The process now goes to A in FIG. **5**. If the answer to step **154** is no, the process also continues at point A in FIG. **5**.

At A, step **204**, in FIG. **5**, the computer CC searches the records to find the pre-programmed payout amounts for the particular donor card. The payout amounts are entered as shown in FIG. **6**. In step **207** of FIG. **5**, the computer CC starts apportioning the payout amounts in the pre-pro-

grammed proportions or priorities and amounts. In steps **210** to **227** it enters the selected amounts in the accounts of various charities, banks, debit card, and vouchers. Normally there should be no remaining amount. However such an amount may exist. Thus in step **230** the computer CC asks if there remains any outstanding amount. If yes, step **234** enters it into a default account selected by the donor at an earlier time. In step **237**, the computer CC updates the accounts both in its own data banks and in the computers CHy and OTz. The computers CHy and OTz confirm the transactions.

In a preferred embodiment, the computer CC transfers and credits charity donations to a charity account or to the charities CHy with each transaction. Hence the donation takes effect with each transaction.

If the answer to step **230** is no, there are outstanding amounts, the process goes to step **237** directly. In step **240**, the cash register CRx prints out the amounts donated, entered into various accounts, the prices, the change, etc.

The computer CC and the cash register CRx then prompt the customer to ask if he or she wishes to change the programming of the various donations in the computer CC. If yes, the card reader CDx displays the apportionment and the amounts, including balances in step **247**, the consumer then enters the desired changes in step **250**, and the computer CC makes the changes in step **254**. This ends the transaction in step **257**. If the answer to step **244** is no, the process goes directly to step **257**.

In one embodiment the consumer carries out steps **244** to **254** at a separate time in a separate card reader CDx and keypad KPx. This prevents the consumer from using these machines while the clerk serves another customer. In fact, the establishment may furnish a separate terminal RTx just for this purpose.

FIG. **6** is a flow chart which illustrates the steps which the computer CC takes, through the keypad KPx, to open or revise donor account or credit account data in a new or existing card account. A display DSx on the keypad KPx or the cash register CRx allows the computer CC to ask the consumer to perform certain acts. After the party has accessed the computer CC the computer, in step **304**, asks whether the consumer has a donor card. If not, in step **307**, the computer CC asks the consumer to enter his or her name or address. In step **308**, the computer CC determines if all information has been entered. If not, it returns to step **307** to ask again for the desired information. If yes, the computer CC proceeds to step **310** to ask the consumer to choose a personal identification (PIN) number. In step **314**, the computer determines if the PIN number is acceptable. If not it returns to step **310** for another number. If yes, the computer advances to step **317** to assign a new card number.

If the answer in step **304** yes, that the consumer has a card, the computer CC proceeds to step **320** to have the customer enter the card. In step **324**, it asks the consumer to enter his or her preselected PIN number. In step **327** it determines whether the entered PIN number matches the preselected PIN number. If not, it returns to step **324** for a corrected number. The computer allows this procedure between steps **324** and **327** recur only three times, thereafter it aborts the program.

If the PIN number is correct and thereby qualified, the computer CC, in step **330** lists all existing donees and amounts donated during any specific time period, such as the calendar year. The consumer may request any time period. In step **334**, it also lists all credit accounts with balances. In step **337** it asks the consumer to list all donee accounts to be eliminated, if any. In step **340** it asks the consumer to list all credit accounts to be eliminated if any. The computer then proceeds to step **344**. Step **344** also receives a prompt from step **317** if the card number is new.

In step **344**, the computer asks the consumer to enter any new donee account or credit account. In step **347**, it determines if the donee, in the form of a charity, or credit institution, is in the list of charities or institutions that have been accepted by the system. If the answer is no, the computer, in step **348** asks if the consumer wishes to have a temporary account set up for that donee or credit institution pending investigation. If yes to step **348**, the computer, in step **349**, sets up a temporary account, and lists it as qualified pending investigation. If the answer to **348** is no, the computer CC goes back to step **347**.

Once the computer CC has qualified a donee or credit institution, it goes to step **350** to ask if this is the last donee account or credit account the consumer wishes to add. If not the process goes back to step **344**. If yes, the computer cancels all prior allocations in step **354** and, in step **357**, sequentially lists all remaining and new donee account and credit accounts showing the old allocations where applicable. In step **360**, it asks the consumer to enter a new percentage allocation for each account. As a check, in step **364**, the computer asks if the total percentages exceed 100%. If yes, it returns to step **360** for a new entry. If not, it proceeds to step **367** to ask if this is the last account. If not it goes to step **370** to ask the consumer to go to the next account and returns to step **360**. If yes, the computer CC goes to step **374** where it asks if the total percentage is 100%. If not, the computer CC places the remaining percentage in a consumer's personal default account asks the consumer to select an account and change to allocations in step **377**. The computer, in step **380**, ends the process and has the keypad print out the results.

According to another embodiment, the computer CC demands a PIN number each time the card is used. In another embodiment, the computer may permit others to donate in behalf of the card owner, such as a parent contributing for a child. In that case step **124** permits entry only of the card number without the card.

In some instances, when the amount of cash is less than the price, the sales establishment or customer may want to abort the sale. Then, at step **117**, the cash register CRx asks whether to abort. If yes, the process must start again at step **104**.

A variation of the embodiment of FIGS. **4**, **4A**, **5**, and **5A** appears in FIG. **7**. Here, the process starts at step **100** where the system asks if the consumer wishes to make a direct transfer of cash into the system. If the answer is no, in step **102** the consumer is asked if he or she wishes to make a purchase. If the answer is yes, the system goes to step **104** in FIG. **4** to read the code on any items to be purchased. If the answer is step **100** is yes, the system goes to step **134** to read the card. If the answer to step **102** is no, the process ends.

In another embodiment shown in FIG. **7A**, after the cash register in step **104** of FIG. **4** reads the codes of all items to be purchased. In step **105** the cash register CRx of FIG. **1** or the remote input RIx in FIG. **1A** calculates the total amount of cash rebates (or coupons) due the consumer. In step **106** the consumer is asked if he or she wishes to have the total amount of cash rebates converted into financial credits for transfer to his or her account. If the answer is no, in step **107** the system determines the total price by subtracting the amount of rebates due the consumer. If the answer is yes, the cash amount from rebates will be entered into the system

starting with step 124 of FIG. 4 where the consumer is asked to enter in their card or account identification number.

FIGS. 8.1A to 8.1E, 8.2, & 8.2A illustrate several embodiments. Of these figures, FIGS. 8.2 and 8.2A show a POS system.

In FIGS. 8.2 & 8.2A, the POS embodiments include a clearinghouse central computer (CCC) containing a central processor CPU and a large data storage DS. A communications system CS that may include telephone lines, satellites, or cables connects the CCC to a number of electronic cash registers (ECRx) (where x=1, . . . M, . . . N) in retail outlets, such as shops, supermarkets, gasoline stations, department stores, etc. at locations remote from the central computer. Throughout this specification, the term x, when appended to the end of a reference character, is equal to 1, . . . M, . . . N.

FIG. 8.2A is identical to FIG. 8.2 except that the cash registers CRx are replaced generally by remote inputs R1I . . . RIM . . . RIN (RIx collectively). Examples of such inputs include cash registers, point of sale terminals, and draft capture machines. In the description below, reference to cash registers CRx also generally includes the remote inputs RIx.

In FIG. 8.1A, an "open" POS network embodies a four level spending/saving system comprised of Level 1 SP (multiple subscriber/payors), who tender excess payments or transfers excess funds to Level 2 MC (multiple merchant/collectors), who in turn make computer entry of data and funds for electronic transfer to Level 3 CCC (a singular managed clearinghouse central computer), who in turn transfers data and funds to Level 4 PA (multiple provider accounts), for the final purchase of products or services.

In FIG. 8.1A the excess funds are created at point of sale counters (POS) by the merchant/collectors (MC) who "front end" process the subscriber/payor (SP) spending transactions to determine the excess difference between the purchase price of goods or services and the amount of payment rendered.

After the amount of excess funds is determined by the MC's electronic cash register (ECR), the SP makes a transfer into a clearinghouse central computer (CCC) by providing a transaction card or an account number to the MC. The MC then swipes the card or enters the account number through an ECR or a draft capture remote terminal to record the time, the terminal location, the amount of funds entered, and the account number used. The terminal or cash register then prints out a receipt of the transaction and the MC returns the card and the receipt to the SP.

The input of individual transactions into the MC remote terminal can be completed in an "off-line" or "on-line" or a combination of both modes. At the completion of a specified period or amount, e.g. day, week, $50.00, the total off line transaction file stored in the MC terminal is then batched "on line" to the CCC (clearinghouse's central computer). The ability to process individual transactions in an off line mode is made possible due to the fact that the system does not require on line authorization, as in credit and debit card processing.

Each terminal location follows the same reporting procedure so that the CCC will have a record of all transactions made into the system, regardless of the location of the terminals. The files sent to the CCC contain details of each transaction by the identification of the account, the amount of the transfer, the date, and the terminal that accepted the transfer. The actual transfer of cash into the system starts when the MC sends the cash received from the SP into their bank for EFT transfer to the clearinghouse's bank account and concludes with the CCC EFT transferring funds to each listed PC (provider account) per the transaction records received from the merchant terminals. The transfer of cash from one account to the next is accomplished by the usual and customary bank EFT transferring through the ACH (Automatic Clearing House) or via EDI (Electronic Data Interchange).

Effectively, the system allows each SP the ability to make multiple transfers, in varied cross country locations, into terminals operated by unrelated parties, transferring as little as a penny in any one transaction, and often on a 24 hour demand basis.

The MC that operate the ECR terminals are at the time of operation both neutral and passive as to the selection of the consumer's provider(s), as well as not directing the distribution of funds to the consumer's provider(s). Only in this system are SP able to transfer their excess change created when dealing with multiple and diverse payees. The money is transferred into an "open" network that will pool and then transfer the once fragmented funds onto PA selected by the SP. In this system as compared to the existing state of art, the PA who will receive the transferred funds from the network need not also be the original collector of the transfers. Therefore, we have a "open" system that allows for a mix and match of diverse collectors and providers.

Under the system it is possible for one entity to provide both a collect or and provider role, but under different and autonomous points in the network cycle. For example, Sears may enroll a subscriber consumer in a Sears store account allowing the consumer to use their Sears issued mag stripe card to identify them when they enter excess change into any merchant/collector terminal. In this capacity Sears is playing the role of a distinct provider in the network. The card may then be used to transfer excess funds at fast food restaurants, convenience stores, other department stores, etc. Also the SP could go into any Sears store and enter excess funds into a Sears terminal for transfer to the network. On these occasions Sears would be playing a distinct role as a participating MC, within the network, and follow the same procedures as any other MC, as well as also being a PA at the end of the network chain.

In FIGS. 8.1B & 8.1C, the Clearinghouse Managed System (CMS) starts with Level 1, the subscriber/payors, tendering an excess financial payment to Level 2, merchant/collectors. They in turn enter the amount of the excess payment into an electronic cash register/remote terminals which then sends the funds and data on-line per transaction, or along with other transfers in a batched format, by a communication system to Level 3, clearinghouse central computer. Level 3 assigns the funds to an account previously opened by Level 1 SP through services provided by Level 3. The funds are then forwarded, when they reach pre-selected thresholds, by ACH (Automatic Clearing House) or EDI (Electronic Data Interface) transfer to Level 4, the provider accounts, selected by Level 1 SP.

The Clearinghouse Managed System (CMS), has the network providing a more active role by the system's central computer enrolling the SP in accounts and then assuming the role of an account manager. Under this arrangement the network will direct the overall operation of the system, issue transaction cards (bar code, mag stripe and/or "smart" cards or devices), operate the system's central computer, provide both on-line and off-line communications between the POS terminals and the central computer, accept funds, assume fiscal responsibility for the SP funds on account, maintain all account records, provide all outside payments to parties selected by the SP, and even allow the SP the ability to access their accounts for the purpose of receiving credit at

the time of POS purchase to pay the MC. Under the CMS, in addition to the network serving as an account manager, it will also appoint banks, credit card institutions, and merchant/collectors to assume additional fiduciary responsibilities.

In FIGS. 8.1D & 8.1E, the Provider Managed System (PMS) starts with Level 1, the subscriber/payors, tendering an excess financial payment to Level 2, merchant/collectors. They in turn enter the amount of the excess payment into an electronic cash register/remote terminals which then preferably send the funds and data, along with other transfers in a batched format, by a communication system to Level 3, clearinghouse central computer. Level 3 then segregates the transactions per provider accounts. The data and funds are then forwarded, when they reach pre-selected thresholds, by ACH (Automatic Clearing House) or EDI (Electronic Data Interface) transfer to the Level 4 providers for account management and final distribution. Level 1 SP initially join the network by enrolling in accounts with Level 4 providers.

The Provider Managed System (PMS), is an "open" system that creates a network whereupon SP will directly enroll in accounts managed by PA, receive mag stripe cards issued by the PA, and enter their excess change at POS locations to be transferred by the MC to a neutral network clearinghouse (CCC). Under the PMS, the CCC will accept and process the transaction data and funds and forward both to the PA according to the card identification. The PA will then manage the accounts per the SP instructions.

In the PMS scenario both the merchant MC and the clearinghouse CCC are passive as to the opening of accounts and the SP selections of the final distribution of the funds. Here both the payees and the clearinghouse transfer both the cash and transaction records onto the end PA.

Also under the PMS embodiment, once the funds are received by the PA, who can be banks, insurance companies, security firms, merchandisers, travel agencies, charitable institutions, etc., the SP will determine how to spend the savings for services and/or products.

In FIG. 8.1F, in both the Clearinghouse Managed System or Provider Managed System the data transfer is sent via a proprietary network from Level 2 MC to Level 3. After processing by Level 3 selected data is sent via a proprietary network to Level 4. On the funds transfer side Level 1 enters the funds at Level 2 outlets. Level 2 credits the funds into the MC's bank account and by ACH (Automatic Clearing House) or EDI the funds are transferred to Level 3's bank account for final ACH or EDI to Level 4's bank account.

The ECRx cash registers are connected to respective keypads KPx and card readers CDx. Along with other components together they constitute a remote terminal RT or as in FIG. 8.2A a remote input RIx that is connected to a variety of central computers.

In the CMS embodiment the accounts are managed in the CCC of FIGS. 8.2 & 8.2A. Money is collected at the ECRx for crediting to the consumers' ledgers in the accounts of various charities and other institutions such as banks, travel agencies, mutual fund issuers, debit card issuers, credit card issuers, etc. The data storage DS contains individual storage for charity accounts CA and other accounts OA, such as for banks etc., all with ledgers for individual consumers.

In the PMS embodiment the CCC acts as a clearinghouse and transfers all data and funds onto the respective PA for account management and final distribution.

The CCC communications system CS also connects the CCC to charity computers CHy and other computer OCz, where y=1 . . . k, and z=1 . . . j such as bank computers, merchandise computers, debit account holders, credit card issuers, etc. These charities and other institutions are the ultimate receivers of the donations and transfers collected at the electronic cash registers ECRx. The CCC also includes a default account DA with consumer ledgers to hold moneys not otherwise allocated.

The ECRx includes a change display for exhibiting cash transactions, credit cards, or check purchases. The display automatically operates to show numbers in question. A card reader CDx with a keypad KPx allows the SP or clerk to enter the transfer directly. The keypad KPx permits the SP to change the allocation for this transaction alone or permanently. The keypad KPx also allows the SP to reduce the amount transferred so that he can receive cash change. The terminal RTx or ECRx reports the transfer directly to the CCC via the communication system CS. The CCC prints out periodic reports for interested parties on a need-to-know basis.

According to an embodiment, a consumer in a shop, supermarket, gasoline station, department store, etc. selects the desired merchandise and brings them to a clerk. The clerk inputs the price of all items in a ECRx by way of a register keyboard or a bar code reader and the register totals the price. The consumer offers the clerk either the exact amount of cash or a sum exceeding the price. Then the clerk enters that cash and the amount into the cash register. The ECR subtracts the price from the cash.

If the consumer gives the clerk the exact price nothing more need happen. However, if the money offered the clerk exceeds the price, the consumer may, if he or she wishes, choose to receive the change or to donate or transfer all or a portion of the change. To do the latter, he or she enters a card number into the keypad KPx or enters the card itself into the card reader CDx. The latter reads the number from a bar code or magnetic stripe on the card. The consumer can also enter into the keypad how much of the total change, he or she is to receive, should be credited to various predetermined accounts in the CCC. The register ECRx reads the numbers entered into the keyboard or the number entered by way of the card reader CDx.

In addition if SP wish to make a direct transfer of funds into the network, (rather than make a purchase and tender excess funds), all that is necessary is to enter the amount transferred into the ECRx and the funds will be transferred to the CCC.

A transaction card IXC1 according to an embodiment appears in FIG. 8.3 with a magnetic stripe MS carrying the donor's number. A card IXC2 in FIG. 8.3 includes the number in the form of a bar code BC. In another embodiment of the system, the card may be a smart card. Also in regard to the use of bar codes, the codes may be incorporated in the design of a key chain device or displayed on windshields or car windows to allow the system to be accessed under a variety circumstances, i.e., drive through window, toll booth, etc.

After receiving the data, the ECR accesses the CCC. The latter allocates the change, a portion of the change, or the amount of a direct transfer provided by the SP among various charity accounts CA and other accounts OA in the CCC. The distributions to various accounts are preprogrammed commands which the consumer has previously instructed the CCC to complete. For each transfer or donation made, the SP receives a printed receipt of the transaction from the ECRx or RTx.

If desired, the consumer can choose to enter in only a fraction of the difference between the cash presented and the price. The consumer then enters the amount to be transferred and receives the appropriate cash change.

According to another embodiment with every transaction, the computer electronically transfers all amounts allocated to each charity CHy immediately, as soon as the computer can access the charity computer, or when there is a sufficient amount of money. In this way the donor is always assured that the contribution takes effect. Transfers in the other accounts OA may be sent immediately or held until a sufficient amount is accumulated to be acceptable by the other institutions.

An example of the operation of the CMS embodiment appears in the flow chart of FIGS. 8.4A to 8.4D. This flow chart depicts an on-line version of the CMS embodiment. The CMS, however, could also be operated in an off-line mode and the transactions that are processed by Level 2 MC would then be stored in memory and transferred in a batched format to Level 3 CCC at periodic intervals. In FIGS. 8.4A & 8.4B it is assumed that the customer is purchasing merchandise that may carry bar codes. However, the system is also applicable for purchase of services, rentals, or other valuables.

In step **8104** of FIG. 8.4A, the clerk enters the prices of the various pieces of merchandise, either by way of a keyboard (not shown) or a bar code reader BCRx, into the cash register ECR. In step **8107**, the cash register determines the total price. The customer then gives the clerk the cash to cover or exceed the total price. While this example refers to cash, the system is also applicable to payment by check, credit or debit card. That is, the customer may wish to have an amount charged to the checking account, credit or debit card in excess of the price in order to make donations or distributions according to the system. For purposes of this description the word cash is used also to embrace check, credit or debit card payments.

In step **8110**, the clerk then enters the amount of the cash payment into the ECRx. Under normal circumstances, the cash payment will equal or exceed the total spending price unless there is transfer of cash into the system without a purchase. However, the system allows the SP to withdraw moneys from a credit balance in one of the accounts recorded in the CCC. While unlikely, this may also occur with a credit or debit card sale. Thus, in some situations, the amount of cash may fall short of the total price. In step **8114** the cash register determines if the amount of cash exceeds the total price.

If the answer is yes, the cash exceeds the sale price, the ECRx determines the amount of change by subtracting the price from the cash in step **8117**. If the answer is no, the cash does not exceed the sale price, the register determines the amount due in step **8120**. In step **8124**, the cash register ECRx asks whether the customer has and wishes to use a network card. The clerk or customer may respond by keyboard, or directly by entering the card into the card reader CDx.

If the customer does not have or does not wish to use a network card in response to step **8124**, the cash register ECRx prints the transaction in step **8127** and in step **8130**, prompts the clerk to make change or collect more cash. If the customer does not offer any needed cash the clerk must abort or otherwise correct the transaction.

If the customer wishes to use a network card, the clerk may enter this information into the register's keyboard, or the customer may enter the card into the card reader CDx. In step **8134**, the ECRx reads the network card. In FIG. 8.4B in step **8137**, the ECRx determines whether the card is valid. If not, the register ECRx returns to step **8127**.

If the card is valid, the ECR again asks if the cash offered exceeds the total price in step **8140**. If not, in step **8144**, the ECR prompts the cash register CR display DS to ask if the cash register should debit the deficient amount from one of the SP cardholder's accounts. If not, the process returns to step **8127**.

If the answer to step **8144** is yes, the computer CCC, in step **8145**, asks the customer to enter his or her personal identification (PIN) number. In step **8146**, the CCC determines if the PIN number matches the card number. If not, the computer returns to step **8127**. If yes, it determines if the card contains a sufficient balance to cover the amount due. If not, the process again returns to step **8127**. If yes in step **8150**, the computer withdraws the money from the card account and credits it to the merchant's account. In step **8150** the cash register ECRx also prints out the transaction.

If the answer to step **8140**, namely to the question whether there is more cash than the price, is yes, step **8154** causes the ECR to display a message asking whether the customer wishes to retain some of the change due. If yes, the ECR prompts the customer to enter into the keypad KPx how much he or she wishes to retain transfer. In FIG. 8.4C in step **8157**, the cash register ECR indicates to the clerk to give the appropriate net change and shows the net transfer amount.

The process now goes to A in FIG. 8.4D. If the answer to step **8154** is no, the process also continues at point A in FIG. 8.4D.

At A, step **8204**, in FIG. 8.4D the CCC searches the records to find the pre-programmed pay out amounts for the particular network card. The pay out amounts are entered as shown in FIG. 8.4.D. In step **8207** of FIG. 8.4D, the CCC starts apportioning the pay out amounts in the pre-programmed proportions by priorities and amounts. In steps **8210** to **8227** it enters the selected amounts in the accounts of various charities, banks, debit card, and vouchers. Normally there should be no remaining amount. However, such an amount may exist. Thus in step **8230** the CCC asks if there remains any outstanding amount. If yes, step **8234** enters it into a default account selected by the SP at an earlier time. In step **8237**, the CCC updates the accounts both in its own data banks and in the computers CHy and OCx. The computers CHy and OCx confirm the transactions.

If the answer to step **8230** is no, there are outstanding amounts, the process goes to step **8237** directly. In step **8240** the ECRx prints out the amounts transferred, entered into various accounts, the prices, the change, etc.

The CCC and the ECRx then prompt the customer in step **8244** to ask if he or she wishes to change the programming of the various accounts in the CCC. If yes, the card reader CDx or the CCC displays the apportionment and the amounts, including balances in step **8247**, the consumer then enters the desired changes in step **8250**, and the CCC or the card reader makes the changes in step **8254**. This ends the transaction in step **8257**. If the answer to step **8244** is no, the process goes directly to step **8257**.

In one embodiment the consumer carries out steps **8244** to **8254** at a separate time in a separate card reader CDx and keypad KPx. This prevents the consumer from using these machines while the clerk serves another customer. In fact, the establishment may furnish a separate terminal RTx just for this purpose.

Prior to listing in the CCC, the system qualifies each charity for their tax exempt status, operations, management activities, litigation, and other pertinent legal and financial information. The charity must certify to the facts. If the reported information meets the requirement, the charity qualifies. The CCC initiates a checking and updating of the qualification lists on a regular basis. The CCC keeps the qualified charities current on an ongoing basis.

The register furnishes the SP with a printed receipt of each donation for tax purposes and authentication that the charity will receive the money. In an on line mode the receipt can show the date, outlet location, serial number, amount donated, total donated to date, and the current financial results of any specific campaigns or projects received by the charity overall.

One embodiment of the system furnishes other rewards to the donor. For example, the terminal may play a tune, such as "It's a Small World" in response to a donation to the United Nations children's fund. Alternatively, the donor may receive a message that the last ten cent donation has closed another $100 unit in donations to this charity and provide a special discount coupon. As another example the donor may receive a message that the donor's contribution is being matched by an independent sponsor with a bonus donation.

An example of the operation of the PMS embodiment appears in the flow chart of FIGS. **8**.5A & **8**.5B. In the PMS embodiment, the opening and closing of accounts is assumed by PA central computers. This flow chart depicts an off line version of the PMS embodiment in which transactions are processed at Level 2 MC and then stored in memory and transferred via a batched format to Level 3 CCC at periodic intervals. Level 3 would then sort the transactions according to Level 4 account origination and forward said transactions to Level 4. The PMS, however, could also be operated in an on line mode and the transactions would then be processed by a smart card or on line with a central computer located at Level 3 or 4.

Referring now to FIGS. **8**.5A & **8**.5B, there is a flow chart which illustrates the steps which the PMS processes transactions made through ECRx at Level 2 MC.

Beginning at the top, in step **8300**, the remote terminal at the POS counter stands ready to receive input and is also scrolling information messages on how to use the system.

In step **8302**, the clerk inputs the price of each item into ECRx by a bar code reader or by keypad.

In step **8304**, the terminal computer totals the price of all of the items.

In step **8306**, the clerk enters the amount of payment, on most occasions cash, into the terminal computer. However, if a check, debit or credit card is tendered by the SP, any excess payment effectively becomes cash and is therefore eligible for transfer.

In step **8308**, the terminal computer asks if the amount tendered is more than the total purchase price.

If no and the number is zero, the terminal computer goes to step **8310** and a receipt is printed out. In step **8312** the transaction would end and the terminal computer returns to step **8300** for new transactions.

If yes, in step **8314** the terminal computer calculates the difference and displays the value and goes to step **8316**. In step **8316** the terminal computer asks if the consumer wishes to use the system.

If the answer is no, in step **8318** a receipt is printed out, and in step **8320** the transaction is ended and the terminal computer returns to step **8300**.

If the answer to step **8316** is yes, in step **8322** the terminal computer asks if you are a subscriber?

If the answer is no, step **8324** allows a non-subscriber to use the system by asking the clerk to enter in a generic access code. On these occasions, most likely, the non-subscriber will be making a donation for charitable purposes. At this time in step **8326**, the non-subscriber will pick from a list of approved charities and the clerk will key in the selection. In step **8328** a receipt will be printed showing evidence of the contribution. This same receipt will also provide an audit trail for individuals and or organizations to confirm that the charitable institutions received the donation. In step **8330** the transaction would end and the terminal computer returns to step **8300**.

Referring now to FIG. **8**.5B if the answer is yes, in step **8332** the subscriber or the clerk enters the subscriber's card into the terminal. The terminal computer reads the card and automatically records all of the cents in the POS change as a transfer or contribution. If the subscriber wishes to add in all of the change (coins and bills) **8332**A is entered into the computer. If the subscriber wishes to add in a specified portion of the change, **8332**B is prompted into the keypad along with the specified amount, for example $1.54 out of $2.54 in available change.

In step **8334**, the terminal computer asks if the subscriber wishes to bypass their default instructions for charities and select a special charity for this transaction.

In step **8336** if the answer is no, the terminal computer advances to step **8340**.

If yes in **8334**, in step **8338** the bypass charity account number is entered into the terminal computer through the keypad.

In step **8340** the subscriber will receive a receipt showing their donor contribution.

In step **8342** the terminal computer writes the transaction into memory. In step **8344** the transaction would end and the terminal computer returns to step **8300**.

In step **8346**, on a programmed time basis, the terminal computer forwards, by modem, the batch transactions held in memory to Level 3 CCC.

In order to enroll in the CMS embodiment, SP would sign up for accounts with Level 3 CCC. In order to enroll in the PMS embodiment, SP would sign up for accounts with Level 4 PA.

FIGS. **8**.6A & **8**.6B are flow charts that illustrate the enrollment steps for a CMS or PMS account which a central computer takes, through the keypad KPx, to open or revise an SP account. A display DSx on the keypad KPx or the ECRx allows a central computer to ask the consumer to perform certain acts. After the party has accessed the computer, in step **8404**, it asks whether the consumer has a network card. If no in step **8407**, the computer asks the consumer to enter his or her name or address. In step **8408** the computer determines if all information has been entered. If not, it returns to step **8407** to ask again for the desired information. If yes, the computer proceeds to step **8410** to ask the consumer to choose a personal identification (PIN) number. In step **8414** the computer determines if the PIN number is acceptable. If not, it returns to step **8410** for another number. If yes, the computer advances to step **8417** to assign a new card number.

If the answer in step **8404** is yes, that the consumer has a card, the computer proceeds to step **8420** to have the customer enter the card. In step **8424** it asks the consumer to enter his or her pre-selected PIN number. In step **8427** it determines whether the entered PIN number matches the pre-selected PIN number. If not, it returns to step **8424** for a corrected number. The computer allows this procedure between steps **8424** and **8427** to occur only three times, thereafter it aborts the program.

If the PIN number is correct and thereby qualified, the computer in step **8430** lists all existing accounts and amounts transferred during any specific time period, such as the calendar year. The consumer may request any time period. In step **8434** it also lists all accounts with balances. In FIG. **8**.6B in step **8437** the consumer lists all accounts to be eliminated, if any. In step **8440** the consumer lists any

accounts to be added if any. Step **8440** also receives a prompt from step **8417** if the card number is new.

In step **8447** it determines if the account, in the form of a charity, merchant, or institution, is in the list of charities or institutions that have been accepted by the system. If the answer is no, the computer in step **8448** asks if the consumer wishes to have a temporary account set up for that donee or institution pending investigation. If yes to step **8448**, the computer in step **8449** sets up a temporary account, and lists it as qualified pending investigation. If the answer to **8448** is no, the computer goes back to step **8447**.

Once the computer has qualified a donee or institution, it goes to step **8450** to ask if this is the last account the consumer wishes to add. If not, the process goes back to step **8444**. If yes, the computer cancels all prior allocations in step **8454** and in step **8457** sequentially lists all remaining and new accounts showing the old allocations where applicable. In step **8460** it asks the consumer to enter a new percentage allocation for each account. As a check, in step **8464**, the computer asks if the total percentages exceed 100%. If yes, it returns to step **8460** for a new entry. If not, it proceeds to step **8467** to ask if this is the last account. If not, it goes to step **8470**. The computer then goes to step **8474** where it asks if the total percentage is 100%. If not, the computer places the remaining percentage in a consumer's personal default account and asks the consumer to select accounts and change allocations in step **8477**. The computer in step **8480** ends the process and prints out the results.

To make a direct transfer of finds into the network of FIG. **9** (rather then make a purchase and tender excess funds), all that is necessary is to enter the amount transferred into the ECRx and the funds will be transferred to the Clearing House Central Computer CCC of FIG. **8.2**. This is accomplished as shown in FIG. **9** which is similar to FIG. **7**. Here, the process starts in step **9100**, where the system asks if the consumer wishes to make a direct transfer of cash into the system. If the answer is no, in step **9102** the consumer is asked if he or she wishes to make a purchase. If the answer is yes, the system goes to step **8104** in FIG. **8.4A** to read the code on any items to be purchased. If the answer is step **9100** is yes, the system goes to step **8134** to read the card. If the answer to step **9102** is no, the process ends.

The system contrasts with present day situations in which a clerk inputs the price of all items in the cash register and the latter totals the price. The consumer offers either the exact amount of cash or a sum exceeding the price, and the clerk enters that amount. The cash register then subtracts the price from the cash.

According to the system, the clerk also inputs the price of all items in the cash register and the latter totals the price. The consumer still offers either the exact amount of cash or a sum exceeding the price, and the clerk enters that amount. The cash register then subtracts the price from the cash. However, then the consumer enters their identification account number or card with its bar code or magnetic stripe. The register then contacts the remote processing unit and the latter allocates the change according to the preprogrammed commands which the consumer has previously entered. The consumer receives a printout of all donor transactions as well as the just-completed commercial transaction.

If desired, the consumer can choose to donate only a fraction of the difference between the cash presented and the price. The consumer then enters the amount to be donated and receives the appropriate cash change.

Prior to listing in the central processor, the system qualifies each charity for their tax exempt status, operations, management activities, litigation, and other pertinent legal and financial information. The charity must certify to the facts. If the reported information meets the requirement, the charity qualifies. The computer initiates a checking and updating of the qualification facts on a regular basis. The central processor the keeps the qualified charities on an ongoing basis.

In another example a consumer may enter their discretionary fund at the POS to go to their account for assignment to a number of accounts nonprofits, mutual funds, travel services, banks, etc.

The register furnishes the donor a printed receipt of each donor transaction for tax purposes and authentication that the charity will receive the money. The receipt shows the serial number, amount donated, date, total donated by the donor, and the current financial results of any specific campaigns or project received by the charity overall.

One embodiment of the system furnishes other rewards to the donor. For example, the terminal may play a tune, such as "It's a Small World" in response to donation to the United Nations children's fund. Alternatively the donor may receive a message that the last ten cent donation has closed another $100 units in donations to this charity and provide a special discount coupon. As another example the donor may receive a message that the donor's contribution is being matched by a sponsor with a bonus donation.

The system supervises, implements, and coordinates charitable contributions to benefit all participants in the giving cycle, including the donors, sponsors, charitable organizations, Internal Revenue Service, and end recipients. It allows remote receiving and sending stations, connected to a central processing station, to accept any denomination of giving from a single penny to unlimited dollars. Regardless of the size of the donation, it effectively warrants that all participants that the designated charity has received the donated funds. It thus supports the authenticity of each donation. It can offer unlimited access to the donors concerning their contributions to charities and savings accounts, the intended use of the funds, and feedback concerning the total received by the funds.

The system effectively leverages the power of mere pennies into substantial dollars that in turn become available to charities on a short term collection basis. It rewards and encourages philanthropic giving and savings to all individuals on an every day basis.

The system adds new features to old ways of doing business thus providing consumers, merchants payees, and payors with new benefits. The system uniquely removes the problems consumers have in dealing with the nuisance of loose change, allows consumers to save or donate every time they spend, provides consumers with an improved way to purchase goods or services on a 'lay-a-way' or pre-purchase plan, provides financial institutions with an improved way to maintain or increase their customers' account balances, and provides nonprofits with an improved way to raise needed funds.

While embodiments of the system have been described in detail, it will be evident to those skilled in the art that the system may be embodied otherwise without departing from its spirit and scope.

What is claimed is:

1. A system, comprising:

a point of sale terminal controlled by a merchant;

entry means in the point of sale terminal for having a transactor enter an amount corresponding to cash being offered;

calculating means in the point of sale terminal for recording an amount of excess cash,

identifier entering means for entering an identifier; and

apportioning means responsive to said identifier for apportioning at least a part of the excess cash among one or more predetermined accounts, said accounts being identified independent of data in the point of sale terminal.

2. A system as in claim 1, wherein said remote input includes change making means for returning remains from an excess payment, after apportionment, as cash.

3. A system as in claim 2, wherein said point of sale terminal includes a display for displaying the excess cash and the remains.

4. A system as in claim 1, wherein said identifier entering means includes means for entering changes in the apportionment.

5. A system as in claim 1, wherein said apportioning means includes means for allocating a portion of the excess to charity donee accounts with each apportionment.

6. A system as in claim 5, wherein said apportioning means includes means for transferring the portion of the excess for the charity donee account directly to the charity donee with each apportionment.

7. A system as in claim 1, wherein said apportionment means includes:

charity storage means for storing names of a plurality of qualified charities;

bank storage means for storing names of a number of banks;

account storage means for storing numbers of client accounts;

entry means for entering the names of charities, banks and client accounts so as to establish and entered name for each entry of a name;

comparison means responsive to said storage means and said entry means for comparing each entered name with a stored name to determine if the entered name matches a stored name;

assignment means responsive to said comparison means for assigning a charity, bank or other account to an account when the charity, bank or other account has been entered;

recording means responsive to said account storage means for recording money entries into said accounts; and

allocating means responsive to said account storage means for registering an allocation of parts of monies recorded into accounts among the charities, banks or other accounts entered for that account.

8. A system as in claim 1, wherein said apportioning means includes a central processor remote from the point of sale terminal for receiving the data from the identifier entering means.

9. A system as in claim 1, wherein said identifier entering means includes receiving means for receiving a card having and instructions for apportioning, and said apportioning means further includes means for receiving the data from the card.

10. A system as in claim 9, wherein said apportioning means includes a central processor remote from the point of sale terminal for receiving the data from the identifier entering means on a batch processing basis.

11. A system as in claim 8, wherein the central processor receives the data from the identifier entering means on a real time basis.

12. A system as in claim 1, further comprising printout means coupled to said point of sale terminal, said entry means, and said apportioning means for printing out the amounts entered and apportioned.

13. A system as in claim 12, wherein said printout means prints out the status of each of the accounts.

14. A system as in claim 1, wherein the card identifies apportionment among the predetermined accounts independent of data in the point of sale terminal.

15. A system as in claim 1, wherein a coupon or rebate is converted into financial credits for transfer to the one or more predetermined accounts.

16. A point of sale operating method, comprising:

entering an amount corresponding to a sale amount due into a point of sale terminal controlled by a merchant;

entering an amount corresponding to cash being paid;

determining any excess cash payment;

entering a card identifier;

apportioning at least a part of the excess cash payment among one or more of a number of predetermined accounts as determined by the card identifier; and

crediting the excess paid to the accounts to the card identifier;

the predetermined accounts being identified with said card identifier independent of said point of sale terminal.

17. A method as in claim 16, wherein said apportioning step includes making change for returning any remains from the excess payment, after apportionment, as cash.

18. A method as in claim 16 further comprising displaying the excess cash and the remains.

19. A method as in claim 16 further comprising printing out the status of each of the accounts.

20. A method as in claim 16, wherein said step of apportioning includes entering changes in the apportionment.

21. A method as in claim 16, wherein said step of apportioning includes allocating a portion of the excess to charity donee accounts with each apportionment.

22. A method as in claim 21, wherein said apportioning step includes transferring a portion of the excess for the charity donee account directly to the charity donee with each apportionment.

23. A method as in claim 16, wherein said apportionment step includes:

storing names of a plurality of qualified charities;

storing a number of client accounts;

storing names of a number of banks;

entering the names of charities and banks so as to define an entered name for each entry of a name;

comparing each entered name with a stored name to determine if the entered name matches the stored name;

assigning a charity or bank to an account when a charity or bank has been entered;

recording money entries into set accounts; and

registering an allocation of parts of monies recorded into accounts among charities and banks entered for that account.

24. A method as in claim 16, wherein apportionment among the predetermined accounts is identified by the card identifier independent of data in the point of sale terminal.

25. A method as in claim 16, further comprising the step of receiving data from the card identifier in a central processor remote from the point of sale terminal.

26. A method as in claim 16, wherein the step of entering a card identifier includes receiving a card having the card identifier and data including the accounts and instructions for apportioning, and said apportioning step further includes receiving the data from the card.

27. A method as in claim 26, wherein said apportioning step includes receiving in a central processor remote from the point of sale terminal data entered from the card on a batch processing basis.

28. A method as in claim 27, wherein the step of receiving data in the central processor remote from the point of sale terminal includes receiving the data on a real time basis.

29. A method as in claim 24, further comprising the step of printing out the amounts entered and apportioned.

30. A method as in claim 24, wherein the card identifies the relationship of apportioning among accounts independent of data in the point of sale terminal.

31. A method as in claim 16, wherein a coupon or rebate is converted into financial credits for transfer to the one or more predetermined accounts.

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